



Laboratory Report Number: L12020016

Mark Lyon  
Environmental Waste Solutions  
2440 Louisiana Blvd  
Albuquerque, NM 87110

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

Laboratory Contact:  
Stephanie Mossburg – Team Chemist/Data Specialist  
(740) 373-4071  
Stephanie.Mossburg@microbac.com

*I certify that all test results meet all of the requirements of the DoD QSM and other applicable contract terms and conditions. Any exceptions are attached to this cover page or addressed in the method narratives presented in the report. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories, DoD ELAP certification number 2936.01. The reported results are related only to the samples analyzed as received.*

This report was certified on February 13 2012

David Vandenberg – Managing Director

State of Origin: NM  
Accrediting Authority: N/A ID:N/A  
QAPP: DOD Ver 4.1



Microbac Laboratories \* Ohio Valley Division  
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## Record of Sample Receipt and Inspection

### Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

The following discrepancies were noted:

Discrepancy	Resolution
Received 6 of 7 coolers shipped. Didn't receive Chain of Custody or sample MPL 3-0112-2. Also didn't receive any voa samples.	One of the coolers was left in Memphis over night. This cooler was received on Feb 2nd and the temperature was within range. The PO4 sample will be analyzed slightly past the 48 hour hold time.
Received a set of trip blanks not listed on the chain of custody. Added Trips to end of SDG.	

### Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0013451	H	3.0		1015923854660004575000795543156939
0012775	H	0.0		1015923854660004575000795543156983
0012413	H	2.0		1015923854660004575000795543156940
0015745	H	1.0		795543156961
0010235	H	0.0		1002239554660004575000874824307359
0016552	H	2.0		1015923854660004575000795543156950
0014447	H	0.0		3457503310000017955431569722017

### Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	No
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	No
9	Were samples received within EPA hold times?	Yes
10	Were correct preservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

**Samples Received**

Client ID	Laboratory ID	Date Collected	Date Received
MPL4-0112-1	L12020016-01	01/30/2012 13:55	02/01/2012 10:07
MPL4-0112-MS	L12020016-02	01/30/2012 13:55	02/01/2012 10:07
MPL4-0112-MSD	L12020016-03	01/30/2012 13:55	02/01/2012 10:07
MPL2-0112-1	L12020016-04	01/30/2012 17:05	02/01/2012 10:07
MPL3-0112-1	L12020016-05	01/31/2012 10:15	02/01/2012 10:07
MPL3-0112-2	L12020016-06	01/31/2012 10:15	02/01/2012 10:07
MPL1-0112-1	L12020016-07	01/31/2012 15:00	02/01/2012 10:07
TRIP BLANK	L12020016-08	01/31/2012 00:01	02/01/2012 10:07

**Login Number:** L12020016

**Department:** Volatiles

**Analyst:** Anthony Canter

## METHOD

**Preparation** SW-846 5030C/5035A

**Analysis** SW-846 8260B

## HOLDING TIMES

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

## PREPARATION

Sample preparation proceeded normally.

## CALIBRATION

**Initial Calibration:** For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Continuing Calibration and Tune:** Recoveries out of range were observed for the following analytes: Bromomethane. Please see the applicable QC report for a detailed presentation of the failures.

## BATCH QA/QC

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

## SAMPLES

**Internal Standards:** All acceptance criteria were met.

**Surrogates:** All acceptance criteria were met.

**Other:** None.

## Manual Integration Reason Codes

**Reason #1: Data System Fails to Select Correct Peak.** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak.** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline.** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

**Reason #5: Miscellaneous.** Other situations involving integration errors may require in-depth review and technical

judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 41911

**Approved By:** Michael Albertson



**Login Number:** L12020016

**Department:** Semivolatiles

**Analyst:** Cassie A. Augenstein

## METHOD

**Preparation** 3510C

**Analysis** SW-846 8270C

## HOLDING TIMES

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

## PREPARATION

Sample preparation proceeded normally.

## CALIBRATION

**Initial Calibration:** For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Continuing Calibration and Tune:** All acceptance criteria were met.

## BATCH QA/QC

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** Recoveries out of range were observed for the following analytes: Chrysene, Benzo[a]pyrene. Please see the applicable QC report for a detailed presentation of the failures.

All hits in the LCS were biased high; there were no hits found in the samples associated with the LCS.

**Matrix Spikes:** Recoveries out of range were observed for the following analytes: Fluoranthene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene. Please see the applicable QC report for a detailed presentation of the failures.

## SAMPLES

**Samples:** All acceptance criteria were met.

**Internal Standards:** All acceptance criteria were met.

**Surrogates:** All acceptance criteria were met.

## Manual Integration Reason Codes

**Reason #1: Data System Fails to Select Correct Peak** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

**Reason #5: Miscellaneous** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

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**Narrative ID:** 41749

**Approved By:** Mike Cochran





**Login Number:** L12020016

**Department:** Conventionals

**Analyst:** Tammy Morris

#### **METHOD**

**Analysis** SW846 9040C,9045D/EPA 150.1/SM4500-H B (pH)

#### **HOLDING TIMES**

**Sample Analysis:** All holding times were met.

#### **PREPARATION**

Sample preparation proceeded normally.

#### **BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

#### **SAMPLES**

**Samples:** All acceptance criteria were met.

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**Narrative ID:** 42100

**Approved By:** Deanna Hesson

A handwritten signature in black ink, appearing to read "Deanna Hesson".

**Login Number:** L12020016  
**Department:** General Chromatography  
**Analyst:** Eric Lawson

## METHOD

**Analysis** SW-846 8082A

## HOLDING TIMES

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

## PREPARATION

Sample preparation proceeded normally.

## CALIBRATION

**Initial Calibration:** For all compounds that yielded a %RSD greater than 20%, linear or higher order equations were applied. All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Continuing Calibration and Tune:** All acceptance criteria were met.

## BATCH QA/QC

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

## SAMPLES

**Samples:** All acceptance criteria were met.

**Surrogates:** All acceptance criteria were met.

## Manual Integration Reason Codes

**Reason #1: Data System Fails to Select Correct Peak** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

**Reason #5: Miscellaneous** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor

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**Narrative ID:** 41751

**Approved By:** Mike Cochran



**Login Number:** L12020016

**Department:** Metals

**Analyst:** Erin Long

#### METHOD

**Preparation:** SW-846 3005

**Analysis:** SW-846 6010

#### HOLDING TIMES

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

#### PREPARATION

Sample preparation proceeded normally.

#### CALIBRATION

**Initial Calibration:** All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Interference Check Standards:** All acceptance criteria were met.

**Continuing Calibration Verification:** All acceptance criteria were met.

**Continuing Calibration Blank:** All acceptance criteria were met.

#### BATCH QA/QC

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Serial Dilution/Post Digestion Spikes:** WG388773 - All acceptance criteria were met.

**Matrix Spikes:** WG388773 - Sample 01 was chosen by the client for MS/MSD analysis. Samples 02(MS) and 03(MSD) yielded noncompliant recoveries for calcium.

#### SAMPLES

**Samples:** All acceptance criteria were met.

**Narrative ID:** 41901

**Approved By:** Sheri Pfalzgraf



**Login Number:** L12020016

**Department:** Metals

**Analyst:** Ji Hu

## METHOD

**Preparation:** SW-846 3015

**Analysis:** SW-846 6020

## HOLDING TIMES

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

## PREPARATION

Sample preparation proceeded normally.

## CALIBRATION

**Initial Calibration:** All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Interference Check Standards:** All acceptance criteria were met.

**Continuing Calibration:** All acceptance criteria were met.

**Continuing Calibration Blank:** All acceptance criteria were met.

**Low Level Check:** WG388710 - The low level initial calibration verification analyzed initially on 06-Feb-2012 at 10:15 yielded noncompliant results for cadmium and thallium. The low level calibration check was reanalyzed at 10:27 prior to sample analysis and was compliant for thallium. All client samples and batch QA/QC were reanalyzed on a later calibration which was compliant for cadmium.

## BATCH QA/QC

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Serial Dilution/Post Digestion Spikes:** WG388710 - Due to post digestion spike failure for silver, client sample 04 and the post digestion spike were reanalyzed for silver on a later calibration.

**Matrix Spikes:** WG388710 - Sample 01 was chosen by the client for MS/MSD analysis. Samples 02(MS) and 03(MSD) met all acceptance criteria.

## SAMPLES

**Samples:** WG388710 - The reanalysis of client sample 04 attempted on 06-FEB-2012 at 20:44 yielded results inconsistent with the original analysis. Analyst error was suspected. The sample, post digestion spike and serial dilution were reanalyzed again for cadmium and silver on 09-FEB-2012. The latter analysis was reported.

**Narrative ID:** 41851

**Approved By:** Sheri Pfalzgraf



**Login Number:** L12020016

**Department:** Metals - AA

**Analyst:** Pierce Morris

#### **METHOD**

**Preparation:** SW-846 7470

**Analysis:** SW-846 7470

#### **HOLDING TIMES**

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

#### **PREPARATION**

Sample preparation proceeded normally.

#### **CALIBRATION**

**Initial Calibration:** All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Interference Check Standards:** All acceptance criteria were met.

**Continuing Calibration Verification:** All acceptance criteria were met.

**Continuing Calibration Blank:** All acceptance criteria were met.

#### **BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Serial Dilution/Post Digestion Spikes:** WG388741 - All acceptance criteria were met.

**Matrix Spikes:** WG388741 - Sample 01 was chosen by the client for MS/MSD analysis. Samples 02(MS) and 03(MSD) met all acceptance criteria.

#### **SAMPLES**

**Samples:** All acceptance criteria were met.

**Narrative ID:** 41862

**Approved By:** Sheri Pfalzgraf

A handwritten signature in black ink that reads "Sheri L. Pfalzgraf".

**Login Number:** L12020016  
**Department:** General Chromatography  
**Analyst:** Jeremy Kinney

## METHOD

**Analysis** SW-846 9056/300.0

## HOLDING TIMES

**Sample Preparation:** All holding times were met.

**Sample Analysis:** All holding times were met.

## PREPARATION

Sample preparation proceeded normally.

## CALIBRATION

**Initial Calibration:** All acceptance criteria were met.

**Alternate Source Standards:** All acceptance criteria were met.

**Continuing Calibration and Tune:** All acceptance criteria were met.

## BATCH QA/QC

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** Recoveries out of range were observed for the following analytes: Chloride, Fluoride. Please see the applicable QC report for a detailed presentation of the failures.

## SAMPLES

**Samples:** Fractions -01, -02, -03, -04, -05, -06, -07 were analyzed at dilutions only due to their high screen result for Cl which was over the calibration range.

**Surrogates:** All acceptance criteria were met.

## Manual Integration Reason Codes

**Reason #1: Data System Fails to Select Correct Peak** In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

**Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak** This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

**Reason #3: Improperly Integrated Isomers and/or coeluting compounds.** This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

**Reason #4: System Establishes Incorrect Baseline** There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

**Reason #5: Miscellaneous** Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration

is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

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**Narrative ID:** 41811

**Approved By:** Mike Cochran



**Login Number:** L12020016

**Department:** Conventionals

**Analyst:** Deanna Hesson

## METHOD

**Analysis** EPA 310.2 (Alkalinity)

## HOLDING TIMES

**Sample Analysis:** All holding times were met.

## PREPARATION

Sample preparation proceeded normally.

## BATCH QA/QC

**Method Blank:** The blank result was greater than the absolute value of the LOD.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** Recoveries out of range were observed for the following analytes: Alkalinity, Total (as CaCO<sub>3</sub>), Alkalinity, Carbonate (as CaCO<sub>3</sub>), Alkalinity, Bicarbonate (as CaCO<sub>3</sub>). Please see the applicable QC report for a detailed presentation of the failures.

**Duplicates:** All acceptance criteria were met.

## SAMPLES

**Samples:** All acceptance criteria were met.

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**Narrative ID:** 41689

**Approved By:** Deanna Hesson



**Login Number:** L12020016

**Department:** Conventional

**Analyst:** Jeremy Kinney

#### **METHOD**

**Analysis** SW846 9014/9010C/SM4500-CN-C,E-20th (Cyanide)

#### **HOLDING TIMES**

**Sample Analysis:** All holding times were met.

#### **PREPARATION**

Sample preparation proceeded normally.

#### **BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** Cyanide-Ammenable is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to show that all of the cyanide is ammenable (the treated portion is ND). The LCS forms cannot calculate cyanide ammenable. The LCS is acceptable.

**Matrix Spikes:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

#### **SAMPLES**

**Samples:** All acceptance criteria were met.

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**Narrative ID:** 41784

**Approved By:** Deanna Hesson

A handwritten signature in black ink, appearing to read "Deanna Hesson".

**Login Number:** L12020016

**Department:** Conventional

**Analyst:** Dorothy Payne

#### **METHOD**

**Analysis** EPA 120.1/SM2510 B (Conductivity)

#### **HOLDING TIMES**

**Sample Analysis:** All holding times were met.

#### **PREPARATION**

Sample preparation proceeded normally.

#### **BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

**Matrix Spikes:** Recoveries out of range were observed for the following analytes: Conductivity. Please see the applicable QC report for a detailed presentation of the failures.

#### **SAMPLES**

**Samples:** All acceptance criteria were met.

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**Narrative ID:** 42099

**Approved By:** Deanna Hesson

A handwritten signature in black ink, appearing to read "Deanna Hesson".



**Login Number:** L12020016

**Department:** Conventionals

**Analyst:** Dorothy Payne

#### **METHOD**

**Analysis** EPA 420.1 (Phenol)

#### **HOLDING TIMES**

**Sample Analysis:** All holding times were met.

#### **PREPARATION**

Sample preparation proceeded normally.

#### **BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

#### **SAMPLES**

**Samples:** The sample was stored in a refrigerator that failed. The sample became frozen for about 12 hours. The sample was thawed before analyzing.

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**Narrative ID:** 42053

**Approved By:** Deanna Hesson

A handwritten signature in black ink, appearing to read "Deanna Hesson".

**Login Number:** L12020016

**Department:** Conventionals

**Analyst:** Deanna Hesson

#### **METHOD**

**Analysis** EPA 350.1/SM4500-NH3 B(NH3)

#### **HOLDING TIMES**

**Sample Analysis:** All holding times were met.

#### **PREPARATION**

Sample preparation proceeded normally.

#### **BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

#### **SAMPLES**

**Samples:** All acceptance criteria were met.

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**Narrative ID:** 42101

**Approved By:** Deanna Hesson

A handwritten signature in black ink, appearing to read "Deanna Hesson".

**Login Number:** L12020016

**Department:** Conventional

**Analyst:** Deanna Hesson

## METHOD

**Analysis** EPA 353.2/SM4500-NO3 F (Nitrate)

## HOLDING TIMES

**Sample Analysis:** Nitrate is reported as the difference of nitrate-nitrite (28 day hold) and nitrite (48 hour hold). Both analysis were analyzed within the appropriate hold time. The nitrate hold time is within compliance.

## PREPARATION

Sample preparation proceeded normally.

## BATCH QA/QC

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** Recoveries out of range were observed for the following analytes: Nitrate-Nitrite (as N). Please see the applicable QC report for a detailed presentation of the failures.

**Duplicates:** All acceptance criteria were met.

## SAMPLES

**Samples:** All acceptance criteria were met.

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**Narrative ID:** 42102

**Approved By:** Deanna Hesson



**Login Number:** L12020016

**Department:** Conventional

**Analyst:** Holly Reed

#### **METHOD**

**Analysis** EPA 365.2/SM4500-P E (Orthophosphate)

#### **HOLDING TIMES**

**Sample Analysis:** All holding times were met.

#### **PREPARATION**

Sample preparation proceeded normally.

#### **BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

#### **SAMPLES**

**Samples:** All acceptance criteria were met.

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**Narrative ID:** 42103

**Approved By:** Deanna Hesson

A handwritten signature in black ink, appearing to read "Deanna Hesson".

**Login Number:** L12020016

**Department:** Conventional

**Analyst:** Holly Reed

#### **METHOD**

**Analysis** EPA 160.1/SM2540 C(Total Dissolved Solids)

#### **HOLDING TIMES**

**Sample Analysis:** All holding times were met.

#### **PREPARATION**

Sample preparation proceeded normally.

#### **BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

#### **SAMPLES**

**Samples:** All acceptance criteria were met.

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**Narrative ID:** 42106

**Approved By:** Deanna Hesson

A handwritten signature in black ink, appearing to read "Deanna Hesson".

**Login Number:** L12020016

**Department:** Conventionals

**Analyst:** Deanna Hesson

## METHOD

**Analysis** Water: EPA 415.1/SM5310C/SW846 9060 (Total Organic Carbon)

Soil: Lloyd-Khan Methodology

## HOLDING TIMES

**Sample Analysis:** All holding times were met.

## PREPARATION

Sample preparation proceeded normally.

## BATCH QA/QC

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

## SAMPLES

**Samples:** All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 42104

**Approved By:** Deanna Hesson

A handwritten signature in black ink, appearing to read "Deanna Hesson".

**Login Number:** L12020016

**Department:** Conventionals

**Analyst:** Holly Reed

#### **METHOD**

**Analysis** EPA 160.2/SM2540 D (Total Suspended Solids)

#### **HOLDING TIMES**

**Sample Analysis:** All holding times were met.

#### **PREPARATION**

Sample preparation proceeded normally.

#### **BATCH QA/QC**

**Method Blank:** All acceptance criteria were met.

**Laboratory Control Sample:** All acceptance criteria were met.

**Duplicates:** All acceptance criteria were met.

**Matrix Spikes:** All acceptance criteria were met.

#### **SAMPLES**

**Samples:** All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

**Narrative ID:** 42105

**Approved By:** Deanna Hesson

A handwritten signature in black ink, appearing to read "Deanna Hesson".

## Certificate of Analysis

Sample #: L12020016-01

Client ID: MPL4-0112-1

Matrix: Water

Workgroup #: WG388758

Collect Date: 01/30/2012 13:55

Sample Tag: 01

PrePrep Method: N/A

Prep Method: 5030B/5030C/5035A

Analytical Method: 8260B

Analyst: ADC

Dilution: 1

Units: ug/L

Instrument: HPMS6

Prep Date: N/A

Cal Date: 01/30/2012 17:04

Run Date: 02/03/2012 19:14

File ID: 6M105486

Analyte	CAS #	Result	Qual	LOQ	LOD
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.200
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,1-Dichloroethene	75-35-4		U	1.00	0.500
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	2.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
2-Butanone	78-93-3		U	5.00	2.50
2-Chlorotoluene	95-49-8		U	1.00	0.125
2-Hexanone	591-78-6		U	5.00	2.50
4-Chlorotoluene	106-43-4		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Acetone	67-64-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125
Bromobenzene	108-86-1		U	1.00	0.125
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
Chloroform	67-66-3	0.138	J	1.00	0.125

## Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloromethane	74-87-3		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
Ethylbenzene	100-41-4		U	1.00	0.250
Hexachlorobutadiene	87-68-3		U	1.00	0.250
Isopropylbenzene	98-82-8		U	1.00	0.250
Methyl t-butyl ether (MTBE)	1634-04-4		U	1.00	0.500
Methylene chloride	75-09-2		U	1.00	0.250
n-Butylbenzene	104-51-8		U	1.00	0.250
n-Propylbenzene	103-65-1		U	1.00	0.125
Naphthalene	91-20-3		U	1.00	0.200
sec-Butylbenzene	135-98-8		U	1.00	0.250
Styrene	100-42-5		U	1.00	0.125
tert-Butylbenzene	98-06-6		U	1.00	0.250
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
Trichloroethene	79-01-6		U	1.00	0.250
Trichlorofluoromethane	75-69-4	0.531	J	1.00	0.250
Vinyl acetate	108-05-4		U	5.00	2.50
Vinyl chloride	75-01-4		U	1.00	0.250
Xylenes	1330-20-7		U	1.00	0.500

Surrogate	Recovery	Lower Limit	Upper Limit	Q
1,2-Dichloroethane-d4	96.7	70	120	
4-Bromofluorobenzene	98.9	75	120	
Dibromofluoromethane	99.4	85	115	
Toluene-d8	99.8	85	120	

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

## Certificate of Analysis

**Sample #:** L12020016-01

**PrePrep Method:** N/A

**Instrument:** HPMS11

**Client ID:** MPL4-0112-1

**Prep Method:** 5030B/5030C/5035A

**Prep Date:** N/A

**Matrix:** Water

**Analytical Method:** 8260B

**Cal Date:** 01/19/2012 19:25

**Workgroup #:** WG388664

**Analyst:** TMB

**Run Date:** 02/02/2012 16:10

**Collect Date:** 01/30/2012 13:55

**Dilution:** 1

**File ID:** 11M80879

**Sample Tag:** 02

**Units:** ug/L

Analyte		CAS #	Result		Qual	LOQ	LOD
Dichlorodifluoromethane		75-71-8			U	1.00	0.250
Surrogate		Recovery	Lower Limit	Upper Limit	Q		
1,2-Dichloroethane-d4		102	70	120			
4-Bromofluorobenzene		102	75	120			
Dibromofluoromethane		98.7	85	115			
Toluene-d8		101	85	120			
U	Analyte was not detected. The concentration is below the reported LOD.						

**Sample #:** L12020016-01

**PrePrep Method:** N/A

**Instrument:** HPMS7

**Client ID:** MPL4-0112-1

**Prep Method:** 3510C

**Prep Date:** 02/02/2012 13:00

**Matrix:** Water

**Analytical Method:** 8270C

**Cal Date:** 01/27/2012 12:22

**Workgroup #:** WG388668

**Analyst:** CAA

**Run Date:** 02/03/2012 09:41

**Collect Date:** 01/30/2012 13:55

**Dilution:** 1

**File ID:** 7M54259

**Sample Tag:** 01

**Units:** ug/L

Analyte		CAS #	Result		Qual	LOQ	LOD
Naphthalene		91-20-3			U	0.0510	0.0255
Acenaphthylene		208-96-8			U	0.0510	0.0255
Acenaphthene		83-32-9			U	0.0510	0.0255
Fluorene		86-73-7			U	0.0510	0.0255
Phenanthrene		85-01-8			U	0.0510	0.0255
Anthracene		120-12-7			U	0.0510	0.0255
Fluoranthene		206-44-0			U	0.0510	0.0255
Pyrene		129-00-0			U	0.0510	0.0255
Benzo(a)anthracene		56-55-3			U	0.0510	0.0255
Chrysene		218-01-9			U	0.0510	0.0255
Benzo(b)fluoranthene		205-99-2			U	0.0510	0.0255
Benzo(k)fluoranthene		207-08-9			U	0.0510	0.0255
Benzo(a)pyrene		50-32-8			U	0.0510	0.0255
Indeno(1,2,3-cd)pyrene		193-39-5			U	0.0510	0.0255
Dibenzo(a,h)anthracene		53-70-3			U	0.0510	0.0255
Benzo(g,h,i)perylene		191-24-2			U	0.0510	0.0255
1-Methylnaphthalene		90-12-0			U	0.0510	0.0255

## Certificate of Analysis

Analyte	CAS #	Result		Qual	LOQ	LOD
2-Methylnaphthalene	91-57-6			U	0.0510	0.0255
Surrogate	Recovery	Lower Limit	Upper Limit	Q		
Nitrobenzene-d5	66.3	35	114			
2-Fluorobiphenyl	70.9	50	110			
p-Terphenyl-d14	120	33	141			
U	Analyte was not detected. The concentration is below the reported LOD.					

Sample #:	L12020016-01	PrePrep Method:	N/A	Instrument:	HP9	
Client ID:	MPL4-0112-1	Prep Method:	3510C	Prep Date:	02/02/2012 08:30	
Matrix:	Water	Analytical Method:	8082	Cal Date:	01/09/2012 12:41	
Workgroup #:	WG388695	Analyst:	ECL	Run Date:	02/03/2012 13:33	
Collect Date:	01/30/2012 13:55	Dilution:	1	File ID:	9GF67006.F	
Sample Tag:	01	Units:	ug/L			
Analyte	CAS #	Result		Qual	LOQ	LOD
Aroclor-1016	12674-11-2			U	0.532	0.266
Aroclor-1221	11104-28-2			U	0.532	0.266
Aroclor-1232	11141-16-5			U	0.532	0.266
Aroclor-1242	53469-21-9			U	0.532	0.266
Aroclor-1248	12672-29-6			U	0.532	0.266
Aroclor-1254	11097-69-1			U	0.532	0.266
Aroclor-1260	11096-82-5			U	0.532	0.266
Surrogate	Recovery	Lower Limit	Upper Limit	Q		
2,4,5,6-Tetrachloro-m-xylene	53.1	30	132			
Decachlorobiphenyl	84.3	40	135			
U	Analyte was not detected. The concentration is below the reported LOD.					

Sample #:	L12020016-01	PrePrep Method:	N/A	Instrument:	ICP-THERMO2	
Client ID:	MPL4-0112-1	Prep Method:	3005A	Prep Date:	02/03/2012 06:31	
Matrix:	Water	Analytical Method:	6010B	Cal Date:	02/07/2012 08:55	
Workgroup #:	WG388773	Analyst:	EDL	Run Date:	02/07/2012 15:41	
Collect Date:	01/30/2012 13:55	Dilution:	1	File ID:	T2.020712.154158	
Sample Tag:	01	Units:	mg/L			
Analyte	CAS #	Result		Qual	LOQ	LOD
Aluminum, Total	7429-90-5	0.111			0.100	0.0500
Beryllium, Total	7440-41-7			U	0.00200	0.00100
Boron, Total	7440-42-8			U	0.100	0.0500
Calcium, Total	7440-70-2	97.7			0.200	0.100
Iron, Total	7439-89-6	0.278			0.100	0.0500

## Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Magnesium, Total	7439-95-4	18.6		0.500	0.250
Molybdenum, Total	7439-98-7		U	0.0100	0.00500
Potassium, Total	7440-09-7	3.33		1.00	0.500
Sodium, Total	7440-23-5	35.9		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #: L12020016-01

Client ID: MPL4-0112-1

Matrix: Water

Workgroup #: WG388710

Collect Date: 01/30/2012 13:55

Sample Tag: 01

PrePrep Method: N/A

Prep Method: 3015

Analytical Method: 6020

Analyst: JYH

Dilution: 1

Units: mg/L

Instrument: ELAN-ICP

Prep Date: 02/03/2012 06:03

Cal Date: 02/06/2012 09:52

Run Date: 02/06/2012 12:30

File ID: EL.020612.123059

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00160		0.00100	0.000500
Barium, Total	7440-39-3	0.0636		0.00300	0.00150
Chromium, Total	7440-47-3	0.00186	J	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00142	J	0.00200	0.00100
Nickel, Total	7440-02-0	0.00382	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00664		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100
J	Estimated value ; the analyte concentration was less than the LOQ.				
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

Sample #: L12020016-01

Client ID: MPL4-0112-1

Matrix: Water

Workgroup #: WG388710

Collect Date: 01/30/2012 13:55

Sample Tag: 02

PrePrep Method: N/A

Prep Method: 3015

Analytical Method: 6020

Analyst: JYH

Dilution: 1

Units: mg/L

Instrument: ELAN-ICP

Prep Date: 02/03/2012 06:03

Cal Date: 02/06/2012 16:22

Run Date: 02/06/2012 20:21

File ID: EL.020612.202138

Analyte	CAS #	Result	Qual	LOQ	LOD
Cadmium, Total	7440-43-9		U	0.000600	0.000300
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #: L12020016-01

Client ID: MPL4-0112-1

Matrix: Water

Workgroup #: WG388741

Collect Date: 01/30/2012 13:55

Sample Tag: 01

PrePrep Method: N/A

Prep Method: 7470A

Analytical Method: 7470A

Analyst: PDM

Dilution: 1

Units: mg/L

Instrument: HYDRA

Prep Date: 02/03/2012 07:49

Cal Date: 02/03/2012 13:16

Run Date: 02/03/2012 13:37

File ID: HY.020312.133717

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6		U	0.000200	0.000100
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #: L12020016-01

Client ID: MPL4-0112-1

Matrix: Water

Workgroup #: WG388787

Collect Date: 01/30/2012 13:55

Sample Tag: DL01

PrePrep Method: N/A

Prep Method: 300.0

Analytical Method: 300.0

Analyst: JBK

Dilution: 4

Units: mg/L

Instrument: IC2

Prep Date: 02/03/2012 13:04

Cal Date: 12/21/2011 13:49

Run Date: 02/03/2012 15:13

File ID: I20203121513.10

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	61.4		0.800	0.400
Fluoride	16984-48-8		U	0.800	0.400
Sulfate	14808-79-8	144		4.00	2.00
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

**Sample #:** L12020016-01

**Client ID:** MPL4-0112-1

**Matrix:** Water

**Workgroup #:** WG388632

**Collect Date:** 01/30/2012 13:55

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 9040C

**Analytical Method:** 9040C

**Analyst:** TMM

**Dilution:** 1

**Units:** UNITS

**Instrument:** ORION-4STAR

**Prep Date:** N/A

**Cal Date:**

**Run Date:** 02/01/2012 14:56

**File ID:** OS12020615083201

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.27		0.000	0.000

**Sample #:** L12020016-01

**Client ID:** MPL4-0112-1

**Matrix:** Water

**Workgroup #:** WG388663

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 310.2

**Analytical Method:** 310.2

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 11:29

**Run Date:** 02/03/2012 11:44

**File ID:** SC120203002.033

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		148		20.0	10.0

**Sample #:** L12020016-01

**Client ID:** MPL4-0112-1

**Matrix:** Water

**Workgroup #:** WG388663

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 310.2

**Analytical Method:** 310.2

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 11:29

**Run Date:** 02/03/2012 11:44

**File ID:** SC120203002.033

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)			U	20.0	10.0

U Analyte was not detected. The concentration is below the reported LOD.

**Sample #:** L12020016-01

**Client ID:** MPL4-0112-1

**Matrix:** Water

**Workgroup #:** WG388663

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 310.2

**Analytical Method:** 310.2

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 11:29

**Run Date:** 02/03/2012 11:44

**File ID:** SC120203002.033

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		148		20.0	10.0

## Certificate of Analysis

**Sample #:** L12020016-01

**Client ID:** MPL4-0112-1

**Matrix:** Water

**Workgroup #:** WG388947

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** wd

**PrePrep Method:** N/A

**Prep Method:** SM4500-CN-I

**Analytical Method:** SM4500-CN-I

**Analyst:** JBK

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 02/08/2012 08:25

**Run Date:** 02/08/2012 08:40

**File ID:** 1V.1202080840-08

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0419		0.0100	0.00500

**Sample #:** L12020016-01

**Client ID:** MPL4-0112-1

**Matrix:** Water

**Workgroup #:** WG388635

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** CN-A

**PrePrep Method:** N/A

**Prep Method:** SM4500-CN-C,G

**Analytical Method:** SM4500-CN-C,G

**Analyst:** JBK

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 02/03/2012 13:25

**Run Date:** 02/03/2012 14:10

**File ID:** 1V.1202031410-10

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.318		0.0100	0.00500

**Sample #:** L12020016-01

**Client ID:** MPL4-0112-1

**Matrix:** Water

**Workgroup #:** WG388634

**Collect Date:** 01/30/2012 13:55

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 9014-9010C

**Analytical Method:** 9014-9010C

**Analyst:** JBK

**Dilution:** 2

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 02/03/2012 13:20

**Run Date:** 02/03/2012 13:30

**File ID:** 1V.1202031330-07

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.357		0.0200	0.0100

**Sample #:** L12020016-01

**Client ID:** MPL4-0112-1

**Matrix:** Water

**Workgroup #:** WG388884

**Collect Date:** 01/30/2012 13:55

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 120.1

**Analytical Method:** 120.1

**Analyst:** DLP

**Dilution:** 1

**Units:** umhos/cm

**Instrument:** YSI-32

**Prep Date:** N/A

**Cal Date:**

**Run Date:** 02/06/2012 14:30

**File ID:** 32.1202061430-07

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		806		1.00	0.500

## Certificate of Analysis

<b>Sample #:</b> L12020016-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL4-0112-1	<b>Prep Method:</b> 420.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 420.1	<b>Cal Date:</b> 12/02/2011 12:50			
<b>Workgroup #:</b> WG389203	<b>Analyst:</b> DLP	<b>Run Date:</b> 02/09/2012 15:20			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202091520-06			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Phenolics, Total	64743-03-9		U	0.00556	0.00333
U	Analyte was not detected. The concentration is below the reported LOD.				

<b>Sample #:</b> L12020016-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL4-0112-1	<b>Prep Method:</b> 350.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 350.1	<b>Cal Date:</b> 02/07/2012 08:29			
<b>Workgroup #:</b> WG388904	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/07/2012 08:54			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> SC120207001.034			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7		U	0.100	0.0500
U	Analyte was not detected. The concentration is below the reported LOD.				

<b>Sample #:</b> L12020016-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL4-0112-1	<b>Prep Method:</b> 353.2	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 353.2	<b>Cal Date:</b> 02/03/2012 13:00			
<b>Workgroup #:</b> WG388788	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/06/2012 09:16			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 8	<b>File ID:</b> SC12020614494701			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		9.14		0.400	0.200

<b>Sample #:</b> L12020016-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL4-0112-1	<b>Prep Method:</b> SM4500-P-E-20th	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-P-E-20th	<b>Cal Date:</b> 12/21/2011 14:35			
<b>Workgroup #:</b> WG388496	<b>Analyst:</b> HJR	<b>Run Date:</b> 02/01/2012 10:45			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202011045-09			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.449		0.0500	0.0250

## Certificate of Analysis

<b>Sample #:</b> L12020016-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> OVEN			
<b>Client ID:</b> MPL4-0112-1	<b>Prep Method:</b> 160.1/SM2540C	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 160.1	<b>Cal Date:</b>			
<b>Workgroup #:</b> WG388589	<b>Analyst:</b> HJR	<b>Run Date:</b> 02/02/2012 14:40			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> EN.1202021440-07			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		508		20.0	10.0

<b>Sample #:</b> L12020016-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> TOC-VWP			
<b>Client ID:</b> MPL4-0112-1	<b>Prep Method:</b> 415.1	<b>Prep Date:</b> 02/03/2012 10:45			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 415.1	<b>Cal Date:</b> 12/06/2011 09:40			
<b>Workgroup #:</b> WG388670	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/03/2012 10:45			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> TC02032012.009			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		3.39		1.00	0.500

<b>Sample #:</b> L12020016-01	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> OVEN			
<b>Client ID:</b> MPL4-0112-1	<b>Prep Method:</b> 160.2/SM2540D	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 160.2	<b>Cal Date:</b>			
<b>Workgroup #:</b> WG388588	<b>Analyst:</b> HJR	<b>Run Date:</b> 02/02/2012 14:20			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> EN.1202021420-16			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids			U	5.00	2.50

<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> HPMS11			
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> 5030B/5030C/5035A	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 8260B	<b>Cal Date:</b> 01/19/2012 19:25			
<b>Workgroup #:</b> WG388564	<b>Analyst:</b> TMB	<b>Run Date:</b> 02/02/2012 16:41			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> 11M80880			
<b>Sample Tag:</b> 02	<b>Units:</b> ug/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Dichlorodifluoromethane	75-71-8	15.1		1.00	0.250
Surrogate	Recovery	Lower Limit	Upper Limit	Q	
1,2-Dichloroethane-d4	102	70	120		
4-Bromofluorobenzene	99.0	75	120		
Dibromofluoromethane	100	85	115		

## Certificate of Analysis

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Toluene-d8	100	85	120	

Sample #:	L12020016-02	PrePrep Method:	N/A	Instrument:	HPMS6
Client ID:	MPL4-0112-MS	Prep Method:	5030B/5030C/5035A	Prep Date:	N/A
Matrix:	Water	Analytical Method:	8260B	Cal Date:	01/30/2012 17:04
Workgroup #:	WG388758	Analyst:	ADC	Run Date:	02/03/2012 16:30
Collect Date:	01/30/2012 13:55	Dilution:	1	File ID:	6M105481
Sample Tag:	01	Units:	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
1,1,1-Trichloroethane	71-55-6	17.8		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	22.2		1.00	0.200
1,1,2-Trichloroethane	79-00-5	22.3		1.00	0.250
1,1-Dichloroethane	75-34-3	18.9		1.00	0.125
1,1-Dichloroethene	75-35-4	16.0		1.00	0.500
1,2,3-Trichloropropane	96-18-4	21.6		1.00	0.500
1,2,4-Trichlorobenzene	120-82-1	19.4		1.00	0.200
1,2,4-Trimethylbenzene	95-63-6	19.5		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	21.6		2.00	1.00
1,2-Dibromoethane	106-93-4	23.0		1.00	0.250
1,2-Dichlorobenzene	95-50-1	19.7		1.00	0.125
1,2-Dichloroethane	107-06-2	20.1		1.00	0.250
1,2-Dichloropropane	78-87-5	20.5		1.00	0.200
1,3,5-Trimethylbenzene	108-67-8	20.3		1.00	0.250
1,3-Dichlorobenzene	541-73-1	19.1		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.5		1.00	0.125
2-Butanone	78-93-3	18.9		5.00	2.50
2-Chlorotoluene	95-49-8	19.9		1.00	0.125
2-Hexanone	591-78-6	20.0		5.00	2.50
4-Chlorotoluene	106-43-4	18.5		1.00	0.250
4-Methyl-2-pentanone	108-10-1	20.1		5.00	2.50
Acetone	67-64-1	20.0		5.00	2.50
Benzene	71-43-2	19.8		1.00	0.125
Bromobenzene	108-86-1	20.5		1.00	0.125
Bromodichloromethane	75-27-4	20.4		1.00	0.250
Bromoform	75-25-2	18.7		1.00	0.500
Bromomethane	74-83-9	17.0		1.00	0.500
Carbon disulfide	75-15-0	9.70		1.00	0.500
Carbon tetrachloride	56-23-5	17.5		1.00	0.250

## Certificate of Analysis

Analyte	CAS #	Result		Qual	LOQ	LOD
Chlorobenzene	108-90-7	19.6			1.00	0.125
Chlorodibromomethane	124-48-1	21.8			1.00	0.250
Chloroethane	75-00-3	16.5			1.00	0.500
Chloroform	67-66-3	19.4			1.00	0.125
Chloromethane	74-87-3	11.1			1.00	0.500
cis-1,2-Dichloroethene	156-59-2	21.1			1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	21.2			1.00	0.250
Ethylbenzene	100-41-4	17.4			1.00	0.250
Hexachlorobutadiene	87-68-3	18.1			1.00	0.250
Isopropylbenzene	98-82-8	16.0			1.00	0.250
Methyl t-butyl ether (MTBE)	1634-04-4	20.2			1.00	0.500
Methylene chloride	75-09-2	18.1			1.00	0.250
n-Butylbenzene	104-51-8	17.8			1.00	0.250
n-Propylbenzene	103-65-1	19.5			1.00	0.125
Naphthalene	91-20-3	21.4			1.00	0.200
sec-Butylbenzene	135-98-8	19.7			1.00	0.250
Styrene	100-42-5	20.2			1.00	0.125
tert-Butylbenzene	98-06-6	18.7			1.00	0.250
Tetrachloroethene	127-18-4	17.8			1.00	0.250
Toluene	108-88-3	19.8			1.00	0.250
trans-1,2-Dichloroethene	156-60-5	17.9			1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	18.2			1.00	0.500
Trichloroethene	79-01-6	20.5			1.00	0.250
Trichlorofluoromethane	75-69-4	16.6			1.00	0.250
Vinyl acetate	108-05-4	32.3			5.00	2.50
Vinyl chloride	75-01-4	13.5			1.00	0.250
Xylenes	1330-20-7	59.1			1.00	0.500
Surrogate	Recovery	Lower Limit	Upper Limit	Q		
1,2-Dichloroethane-d4	95.3	70	120			
4-Bromofluorobenzene	96.8	75	120			
Dibromofluoromethane	100	85	115			
Toluene-d8	99.6	85	120			

## Certificate of Analysis

**Sample #:** L12020016-02

**Client ID:** MPL4-0112-MS

**Matrix:** Water

**Workgroup #:** WG388668

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 3510C

**Analytical Method:** 8270C

**Analyst:** CAA

**Dilution:** 1

**Units:** ug/L

**Instrument:** HPMS7

**Prep Date:** 02/02/2012 13:00

**Cal Date:** 01/27/2012 12:22

**Run Date:** 02/03/2012 10:07

**File ID:** 7M54260

Analyte	CAS #	Result	Qual	LOQ	LOD
Naphthalene	91-20-3	0.733		0.0543	0.0272
Acenaphthylene	208-96-8	0.719		0.0543	0.0272
Acenaphthene	83-32-9	0.762		0.0543	0.0272
Fluorene	86-73-7	0.819		0.0543	0.0272
Phenanthrene	85-01-8	1.03		0.0543	0.0272
Anthracene	120-12-7	1.10		0.0543	0.0272
Fluoranthene	206-44-0	1.35		0.0543	0.0272
Pyrene	129-00-0	1.22		0.0543	0.0272
Benzo(a)anthracene	56-55-3	1.23		0.0543	0.0272
Chrysene	218-01-9	1.33		0.0543	0.0272
Benzo(b)fluoranthene	205-99-2	1.14		0.0543	0.0272
Benzo(k)fluoranthene	207-08-9	1.11		0.0543	0.0272
Benzo(a)pyrene	50-32-8	1.29		0.0543	0.0272
Indeno(1,2,3-cd)pyrene	193-39-5	1.01		0.0543	0.0272
Dibenz(a,h)anthracene	53-70-3	0.985		0.0543	0.0272
Benzo(g,h,i)perylene	191-24-2	1.08		0.0543	0.0272
1-Methylnaphthalene	90-12-0	0.689		0.0543	0.0272
2-Methylnaphthalene	91-57-6	0.757		0.0543	0.0272
Surrogate	Recovery	Lower Limit	Upper Limit	Q	
Nitrobenzene-d5	77.4	35	114		
2-Fluorobiphenyl	67.0	50	110		
p-Terphenyl-d14	123	33	141		

**Sample #:** L12020016-02

**Client ID:** MPL4-0112-MS

**Matrix:** Water

**Workgroup #:** WG388695

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 3510C

**Analytical Method:** 8082

**Analyst:** ECL

**Dilution:** 1

**Units:** ug/L

**Instrument:** HP9

**Prep Date:** 02/02/2012 08:30

**Cal Date:** 01/09/2012 12:41

**Run Date:** 02/03/2012 13:50

**File ID:** 9GF67007.F

Analyte	CAS #	Result	Qual	LOQ	LOD
Aroclor-1016	12674-11-2	2.34		0.510	0.255
Aroclor-1221	11104-28-2		U	0.510	0.255

## Certificate of Analysis

Analyte	CAS #	Result		Qual	LOQ	LOD
Aroclor-1232	11141-16-5			U	0.510	0.255
Aroclor-1242	53469-21-9			U	0.510	0.255
Aroclor-1248	12672-29-6			U	0.510	0.255
Aroclor-1254	11097-69-1			U	0.510	0.255
Aroclor-1260	11096-82-5	2.55			0.510	0.255
Surrogate	Recovery	Lower Limit	Upper Limit	Q		
2,4,5,6-Tetrachloro-m-xylene	56.0	30	132			
Decachlorobiphenyl	80.5	40	135			
U	Analyte was not detected. The concentration is below the reported LOD.					

Sample #: L12020016-02

PrePrep Method: N/A

Instrument: ICP-THERMO2

Client ID: MPL4-0112-MS

Prep Method: 3005A

Prep Date: 02/03/2012 06:31

Matrix: Water

Analytical Method: 6010B

Cal Date: 02/07/2012 08:55

Workgroup #: WG388773

Analyst: EDL

Run Date: 02/07/2012 15:45

Collect Date: 01/30/2012 13:55

Dilution: 1

File ID: T2.020712.154520

Sample Tag: 01

Units: mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5.04		0.100	0.0500
Beryllium, Total	7440-41-7	0.0251		0.00200	0.00100
Boron, Total	7440-42-8	1.04		0.100	0.0500
Calcium, Total	7440-70-2	101		0.200	0.100
Iron, Total	7439-89-6	2.20		0.100	0.0500
Magnesium, Total	7439-95-4	23.4		0.500	0.250
Molybdenum, Total	7439-98-7	0.497		0.0100	0.00500
Potassium, Total	7440-09-7	28.2		1.00	0.500
Sodium, Total	7440-23-5	61.0		0.500	0.250
Tin, Total	7440-31-5	0.523		0.500	0.250
Vanadium, Total	7440-62-2	0.501		0.0100	0.00500
Zinc, Total	7440-66-6	0.508		0.0200	0.0100

Sample #: L12020016-02

PrePrep Method: N/A

Instrument: ELAN-ICP

Client ID: MPL4-0112-MS

Prep Method: 3015

Prep Date: 02/03/2012 06:03

Matrix: Water

Analytical Method: 6020

Cal Date: 02/06/2012 16:22

Workgroup #: WG388710

Analyst: JYH

Run Date: 02/06/2012 20:29

Collect Date: 01/30/2012 13:55

Dilution: 1

File ID: EL.020612.202924

Sample Tag: 02

Units: mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Cadmium, Total	7440-43-9	0.0606		0.000600	0.000300

## Certificate of Analysis

<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ELAN-ICP
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 02/03/2012 06:03
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020	<b>Cal Date:</b> 02/06/2012 09:52
<b>Workgroup #:</b> WG388710	<b>Analyst:</b> JYH	<b>Run Date:</b> 02/06/2012 12:38
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> EL.020612.123845
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0	0.0662		0.00100	0.000500
Arsenic, Total	7440-38-2	0.0620		0.00100	0.000500
Barium, Total	7440-39-3	0.129		0.00300	0.00150
Chromium, Total	7440-47-3	0.0631		0.00200	0.00100
Cobalt, Total	7440-48-4	0.0591		0.00100	0.000500
Copper, Total	7440-50-8	0.0620		0.00200	0.00100
Lead, Total	7439-92-1	0.0666		0.00100	0.000500
Manganese, Total	7439-96-5	0.0590		0.00200	0.00100
Nickel, Total	7440-02-0	0.0636		0.00400	0.00200
Selenium, Total	7782-49-2	0.0594		0.00100	0.000500
Silver, Total	7440-22-4	0.0615		0.00100	0.000500
Thallium, Total	7440-28-0	0.0654		0.000200	0.000100

<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> HYDRA
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> 7470A	<b>Prep Date:</b> 02/03/2012 07:48
<b>Matrix:</b> Water	<b>Analytical Method:</b> 7470A	<b>Cal Date:</b> 02/03/2012 13:16
<b>Workgroup #:</b> WG388741	<b>Analyst:</b> PDM	<b>Run Date:</b> 02/03/2012 13:39
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> HY.020312.133903
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6	0.00486		0.000222	0.000111

<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> IC2
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> 300.0	<b>Prep Date:</b> 02/03/2012 13:04
<b>Matrix:</b> Water	<b>Analytical Method:</b> 300.0	<b>Cal Date:</b> 12/21/2011 13:49
<b>Workgroup #:</b> WG388787	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/03/2012 15:49
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 4	<b>File ID:</b> I20203121549.12
<b>Sample Tag:</b> DL01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	67.1		0.800	0.400
Fluoride	16984-48-8	6.89		0.800	0.400

## Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Sulfate	14808-79-8	180		4.00	2.00

**Sample #:** L12020016-02      **PrePrep Method:** N/A      **Instrument:** ORION-4STAR  
**Client ID:** MPL4-0112-MS      **Prep Method:** 9040C      **Prep Date:** N/A  
**Matrix:** Water      **Analytical Method:** 9040C      **Cal Date:**  
**Workgroup #:** WG388532      **Analyst:** TMM      **Run Date:** 02/01/2012 14:57  
**Collect Date:** 01/30/2012 13:55      **Dilution:** 1      **File ID:** OS12020615083901  
**Sample Tag:**      **Units:** UNITS

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.27		0.000	0.000

**Sample #:** L12020016-02      **PrePrep Method:** N/A      **Instrument:** SMARTCHEM  
**Client ID:** MPL4-0112-MS      **Prep Method:** 310.2      **Prep Date:** N/A  
**Matrix:** Water      **Analytical Method:** 310.2      **Cal Date:** 02/03/2012 11:29  
**Workgroup #:** WG388663      **Analyst:** DIH      **Run Date:** 02/03/2012 11:45  
**Collect Date:** 01/30/2012 13:55      **Dilution:** 1      **File ID:** SC120203002.034  
**Sample Tag:** 01      **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO <sub>3</sub> )		162		20.0	10.0

**Sample #:** L12020016-02      **PrePrep Method:** N/A      **Instrument:** SMARTCHEM  
**Client ID:** MPL4-0112-MS      **Prep Method:** 310.2      **Prep Date:** N/A  
**Matrix:** Water      **Analytical Method:** 310.2      **Cal Date:** 02/03/2012 11:29  
**Workgroup #:** WG388663      **Analyst:** DIH      **Run Date:** 02/03/2012 11:45  
**Collect Date:** 01/30/2012 13:55      **Dilution:** 1      **File ID:** SC120203002.034  
**Sample Tag:** 01      **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO <sub>3</sub> )		162		20.0	10.0

**Sample #:** L12020016-02      **PrePrep Method:** N/A      **Instrument:** SMARTCHEM  
**Client ID:** MPL4-0112-MS      **Prep Method:** 310.2      **Prep Date:** N/A  
**Matrix:** Water      **Analytical Method:** 310.2      **Cal Date:** 02/03/2012 11:29  
**Workgroup #:** WG388663      **Analyst:** DIH      **Run Date:** 02/03/2012 11:45  
**Collect Date:** 01/30/2012 13:55      **Dilution:** 1      **File ID:** SC120203002.034  
**Sample Tag:** 01      **Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO <sub>3</sub> )			U	20.0	10.0

## Certificate of Analysis

U	Analyte was not detected. The concentration is below the reported LOD.
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<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> SM4500-CN-I	<b>Prep Date:</b> N/A
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-CN-I	<b>Cal Date:</b> 02/08/2012 08:20
<b>Workgroup #:</b> WG388947	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/08/2012 08:40
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202080840-09
<b>Sample Tag:</b> wd	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.241		0.0100	0.00500

<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> SM4500-CN-C,G	<b>Prep Date:</b> N/A
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-CN-C,G	<b>Cal Date:</b> 02/03/2012 13:25
<b>Workgroup #:</b> WG388635	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/03/2012 14:10
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202031410-11
<b>Sample Tag:</b> CN-A	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.318		0.0100	0.00500

<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> 9014-9010C	<b>Prep Date:</b> N/A
<b>Matrix:</b> Water	<b>Analytical Method:</b> 9014-9010C	<b>Cal Date:</b> 02/03/2012 13:20
<b>Workgroup #:</b> WG388634	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/03/2012 13:30
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 2	<b>File ID:</b> 1V.1202031330-08
<b>Sample Tag:</b>	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.558		0.0200	0.0100

<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> YSI-32
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> 120.1	<b>Prep Date:</b> N/A
<b>Matrix:</b> Water	<b>Analytical Method:</b> 120.1	<b>Cal Date:</b>
<b>Workgroup #:</b> WG388884	<b>Analyst:</b> DLP	<b>Run Date:</b> 02/06/2012 14:30
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> 32.1202061430-08
<b>Sample Tag:</b>	<b>Units:</b> umhos/cm	

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		807		1.00	0.500

## Certificate of Analysis

**Sample #:** L12020016-02

**Client ID:** MPL4-0112-MS

**Matrix:** Water

**Workgroup #:** WG389203

**Collect Date:** 01/30/2012 13:55

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 420.1

**Analytical Method:** 420.1

**Analyst:** DLP

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 12/02/2011 12:40

**Run Date:** 02/09/2012 15:20

**File ID:** 1V.1202091520-07

Analyte	CAS #	Result	Qual	LOQ	LOD
Phenolics, Total	64743-03-9	0.480		0.00500	0.00300

**Sample #:** L12020016-02

**Client ID:** MPL4-0112-MS

**Matrix:** Water

**Workgroup #:** WG388904

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 350.1

**Analytical Method:** 350.1

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/07/2012 08:29

**Run Date:** 02/07/2012 08:54

**File ID:** SC120207001.035

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	1.06		0.100	0.0500

**Sample #:** L12020016-02

**Client ID:** MPL4-0112-MS

**Matrix:** Water

**Workgroup #:** WG388788

**Collect Date:** 01/30/2012 13:55

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 353.2

**Analytical Method:** 353.2

**Analyst:** DIH

**Dilution:** 8

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 13:00

**Run Date:** 02/06/2012 09:16

**File ID:** SC12020614495401

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		9.74		0.400	0.200

**Sample #:** L12020016-02

**Client ID:** MPL4-0112-MS

**Matrix:** Water

**Workgroup #:** WG388496

**Collect Date:** 01/30/2012 13:55

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** SM4500-P-E-20th

**Analytical Method:** SM4500-P-E-20th

**Analyst:** HJR

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 12/21/2011 14:35

**Run Date:** 02/01/2012 10:45

**File ID:** 1V.1202011045-10

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.838		0.0500	0.0250

## Certificate of Analysis

<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> OVEN			
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> 160.1/SM2540C	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 160.1	<b>Cal Date:</b>			
<b>Workgroup #:</b> WG388589	<b>Analyst:</b> HJR	<b>Run Date:</b> 02/02/2012 14:40			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> EN.1202021440-08			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		994		20.0	10.0

<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> TOC-VWP			
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> 415.1	<b>Prep Date:</b> 02/03/2012 11:12			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 415.1	<b>Cal Date:</b> 12/06/2011 09:40			
<b>Workgroup #:</b> WG388670	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/03/2012 11:12			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> TC02032012.011			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		12.4		1.00	0.500

<b>Sample #:</b> L12020016-02	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> OVEN			
<b>Client ID:</b> MPL4-0112-MS	<b>Prep Method:</b> 160.2/SM2540D	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 160.2	<b>Cal Date:</b>			
<b>Workgroup #:</b> WG388588	<b>Analyst:</b> HJR	<b>Run Date:</b> 02/02/2012 14:20			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> EN.1202021420-17			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		28.0		5.00	2.50

<b>Sample #:</b> L12020016-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> HPMS6			
<b>Client ID:</b> MPL4-0112-MSD	<b>Prep Method:</b> 5030B/5030C/5035A	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 8260B	<b>Cal Date:</b> 01/30/2012 17:04			
<b>Workgroup #:</b> WG388758	<b>Analyst:</b> ADC	<b>Run Date:</b> 02/03/2012 17:03			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> 6M105482			
<b>Sample Tag:</b> 01	<b>Units:</b> ug/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
1,1,1-Trichloroethane	71-55-6	17.9		1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5	21.8		1.00	0.200
1,1,2-Trichloroethane	79-00-5	22.3		1.00	0.250
1,1-Dichloroethane	75-34-3	18.9		1.00	0.125
1,1-Dichloroethene	75-35-4	16.0		1.00	0.500

## Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
1,2,3-Trichloropropane	96-18-4	22.4		1.00	0.500
1,2,4-Trichlorobenzene	120-82-1	19.2		1.00	0.200
1,2,4-Trimethylbenzene	95-63-6	19.3		1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8	21.8		2.00	1.00
1,2-Dibromoethane	106-93-4	22.7		1.00	0.250
1,2-Dichlorobenzene	95-50-1	19.8		1.00	0.125
1,2-Dichloroethane	107-06-2	20.1		1.00	0.250
1,2-Dichloropropane	78-87-5	19.9		1.00	0.200
1,3,5-Trimethylbenzene	108-67-8	19.8		1.00	0.250
1,3-Dichlorobenzene	541-73-1	19.1		1.00	0.250
1,4-Dichlorobenzene	106-46-7	19.6		1.00	0.125
2-Butanone	78-93-3	18.5		5.00	2.50
2-Chlorotoluene	95-49-8	19.6		1.00	0.125
2-Hexanone	591-78-6	20.7		5.00	2.50
4-Chlorotoluene	106-43-4	18.9		1.00	0.250
4-Methyl-2-pentanone	108-10-1	20.7		5.00	2.50
Acetone	67-64-1	19.6		5.00	2.50
Benzene	71-43-2	19.5		1.00	0.125
Bromobenzene	108-86-1	20.1		1.00	0.125
Bromodichloromethane	75-27-4	20.4		1.00	0.250
Bromoform	75-25-2	19.0		1.00	0.500
Bromomethane	74-83-9	17.1		1.00	0.500
Carbon disulfide	75-15-0	9.65		1.00	0.500
Carbon tetrachloride	56-23-5	17.1		1.00	0.250
Chlorobenzene	108-90-7	19.7		1.00	0.125
Chlorodibromomethane	124-48-1	21.4		1.00	0.250
Chloroethane	75-00-3	16.7		1.00	0.500
Chloroform	67-66-3	19.4		1.00	0.125
Chloromethane	74-87-3	11.2		1.00	0.500
cis-1,2-Dichloroethene	156-59-2	20.9		1.00	0.250
cis-1,3-Dichloropropene	10061-01-5	20.8		1.00	0.250
Ethylbenzene	100-41-4	17.1		1.00	0.250
Hexachlorobutadiene	87-68-3	17.6		1.00	0.250
Isopropylbenzene	98-82-8	16.0		1.00	0.250
Methyl t-butyl ether (MTBE)	1634-04-4	20.5		1.00	0.500
Methylene chloride	75-09-2	18.0		1.00	0.250
n-Butylbenzene	104-51-8	17.7		1.00	0.250
n-Propylbenzene	103-65-1	19.2		1.00	0.125
Naphthalene	91-20-3	21.5		1.00	0.200

## Certificate of Analysis

Analyte	CAS #	Result		Qual	LOQ	LOD
sec-Butylbenzene	135-98-8	19.4			1.00	0.250
Styrene	100-42-5	20.4			1.00	0.125
tert-Butylbenzene	98-06-6	18.3			1.00	0.250
Tetrachloroethene	127-18-4	17.9			1.00	0.250
Toluene	108-88-3	20.0			1.00	0.250
trans-1,2-Dichloroethene	156-60-5	17.8			1.00	0.250
trans-1,3-Dichloropropene	10061-02-6	18.1			1.00	0.500
Trichloroethene	79-01-6	20.3			1.00	0.250
Trichlorofluoromethane	75-69-4	16.7			1.00	0.250
Vinyl acetate	108-05-4	31.5			5.00	2.50
Vinyl chloride	75-01-4	13.5			1.00	0.250
Xylenes	1330-20-7	59.5			1.00	0.500
Surrogate	Recovery	Lower Limit	Upper Limit	Q		
1,2-Dichloroethane-d4	95.2	70	120			
4-Bromofluorobenzene	95.9	75	120			
Dibromofluoromethane	97.8	85	115			
Toluene-d8	99.2	85	120			

Sample #: L12020016-03	PrePrep Method: N/A	Instrument: HPMS11			
Client ID: MPL4-0112-MSD	Prep Method: 5030B/5030C/5035A	Prep Date: N/A			
Matrix: Water	Analytical Method: 8260B	Cal Date: 01/19/2012 19:25			
Workgroup #: WG388564	Analyst: TMB	Run Date: 02/02/2012 17:12			
Collect Date: 01/30/2012 13:55	Dilution: 1	File ID: 11M80881			
Sample Tag: 02	Units: ug/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Dichlorodifluoromethane	75-71-8	14.1		1.00	0.250
Surrogate	Recovery	Lower Limit	Upper Limit	Q	
1,2-Dichloroethane-d4	102	70	120		
4-Bromofluorobenzene	99.5	75	120		
Dibromofluoromethane	100	85	115		
Toluene-d8	99.4	85	120		

## Certificate of Analysis

**Sample #:** L12020016-03

**Client ID:** MPL4-0112-MSD

**Matrix:** Water

**Workgroup #:** WG388668

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 3510C

**Analytical Method:** 8270C

**Analyst:** CAA

**Dilution:** 1

**Units:** ug/L

**Instrument:** HPMS7

**Prep Date:** 02/02/2012 13:00

**Cal Date:** 01/27/2012 12:22

**Run Date:** 02/03/2012 10:32

**File ID:** 7M54261

Analyte	CAS #	Result	Qual	LOQ	LOD
Naphthalene	91-20-3	0.735		0.0549	0.0275
Acenaphthylene	208-96-8	0.727		0.0549	0.0275
Acenaphthene	83-32-9	0.773		0.0549	0.0275
Fluorene	86-73-7	0.830		0.0549	0.0275
Phenanthrene	85-01-8	1.00		0.0549	0.0275
Anthracene	120-12-7	1.17		0.0549	0.0275
Fluoranthene	206-44-0	1.32		0.0549	0.0275
Pyrene	129-00-0	1.20		0.0549	0.0275
Benzo(a)anthracene	56-55-3	1.21		0.0549	0.0275
Chrysene	218-01-9	1.40		0.0549	0.0275
Benzo(b)fluoranthene	205-99-2	1.09		0.0549	0.0275
Benzo(k)fluoranthene	207-08-9	1.15		0.0549	0.0275
Benzo(a)pyrene	50-32-8	1.26		0.0549	0.0275
Indeno(1,2,3-cd)pyrene	193-39-5	1.17		0.0549	0.0275
Dibenz(a,h)anthracene	53-70-3	1.11		0.0549	0.0275
Benzo(g,h,i)perylene	191-24-2	1.12		0.0549	0.0275
1-Methylnaphthalene	90-12-0	0.695		0.0549	0.0275
2-Methylnaphthalene	91-57-6	0.764		0.0549	0.0275
Surrogate	Recovery	Lower Limit	Upper Limit	Q	
Nitrobenzene-d5	71.6	35	114		
2-Fluorobiphenyl	67.2	50	110		
p-Terphenyl-d14	112	33	141		

**Sample #:** L12020016-03

**Client ID:** MPL4-0112-MSD

**Matrix:** Water

**Workgroup #:** WG388695

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 3510C

**Analytical Method:** 8082

**Analyst:** ECL

**Dilution:** 1

**Units:** ug/L

**Instrument:** HP9

**Prep Date:** 02/02/2012 08:30

**Cal Date:** 01/09/2012 12:41

**Run Date:** 02/03/2012 14:08

**File ID:** 9GF67008.F

Analyte	CAS #	Result	Qual	LOQ	LOD
Aroclor-1016	12674-11-2	2.59		0.562	0.281
Aroclor-1221	11104-28-2		U	0.562	0.281

## Certificate of Analysis

Analyte	CAS #	Result		Qual	LOQ	LOD
Aroclor-1232	11141-16-5			U	0.562	0.281
Aroclor-1242	53469-21-9			U	0.562	0.281
Aroclor-1248	12672-29-6			U	0.562	0.281
Aroclor-1254	11097-69-1			U	0.562	0.281
Aroclor-1260	11096-82-5	2.74			0.562	0.281
Surrogate	Recovery	Lower Limit	Upper Limit	Q		
2,4,5,6-Tetrachloro-m-xylene	66.9	30	132			
Decachlorobiphenyl	83.4	40	135			
U	Analyte was not detected. The concentration is below the reported LOD.					

Sample #: L12020016-03

PrePrep Method: N/A

Instrument: ICP-THERMO2

Client ID: MPL4-0112-MSD

Prep Method: 3005A

Prep Date: 02/03/2012 06:31

Matrix: Water

Analytical Method: 6010B

Cal Date: 02/07/2012 08:55

Workgroup #: WG388773

Analyst: EDL

Run Date: 02/07/2012 15:48

Collect Date: 01/30/2012 13:55

Dilution: 1

File ID: T2.020712.154837

Sample Tag: 01

Units: mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	5.12		0.100	0.0500
Beryllium, Total	7440-41-7	0.0253		0.00200	0.00100
Boron, Total	7440-42-8	1.06		0.100	0.0500
Calcium, Total	7440-70-2	104		0.200	0.100
Iron, Total	7439-89-6	2.22		0.100	0.0500
Magnesium, Total	7439-95-4	23.9		0.500	0.250
Molybdenum, Total	7439-98-7	0.509		0.0100	0.00500
Potassium, Total	7440-09-7	28.7		1.00	0.500
Sodium, Total	7440-23-5	62.4		0.500	0.250
Tin, Total	7440-31-5	0.538		0.500	0.250
Vanadium, Total	7440-62-2	0.507		0.0100	0.00500
Zinc, Total	7440-66-6	0.510		0.0200	0.0100

Sample #: L12020016-03

PrePrep Method: N/A

Instrument: ELAN-ICP

Client ID: MPL4-0112-MSD

Prep Method: 3015

Prep Date: 02/03/2012 06:03

Matrix: Water

Analytical Method: 6020

Cal Date: 02/06/2012 09:52

Workgroup #: WG388710

Analyst: JYH

Run Date: 02/06/2012 12:46

Collect Date: 01/30/2012 13:55

Dilution: 1

File ID: EL.020612.124632

Sample Tag: 01

Units: mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0	0.0664		0.00100	0.000500

## Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Arsenic, Total	7440-38-2	0.0615		0.00100	0.000500
Barium, Total	7440-39-3	0.132		0.00300	0.00150
Chromium, Total	7440-47-3	0.0643		0.00200	0.00100
Cobalt, Total	7440-48-4	0.0617		0.00100	0.000500
Copper, Total	7440-50-8	0.0646		0.00200	0.00100
Lead, Total	7439-92-1	0.0693		0.00100	0.000500
Manganese, Total	7439-96-5	0.0628		0.00200	0.00100
Nickel, Total	7440-02-0	0.0660		0.00400	0.00200
Selenium, Total	7782-49-2	0.0570		0.00100	0.000500
Silver, Total	7440-22-4	0.0634		0.00100	0.000500
Thallium, Total	7440-28-0	0.0670		0.000200	0.000100

Sample #:	L12020016-03	PrePrep Method:	N/A	Instrument:	ELAN-ICP
Client ID:	MPL4-0112-MSD	Prep Method:	3015	Prep Date:	02/03/2012 06:03
Matrix:	Water	Analytical Method:	6020	Cal Date:	02/06/2012 16:22
Workgroup #:	WG388710	Analyst:	JYH	Run Date:	02/06/2012 20:37
Collect Date:	01/30/2012 13:55	Dilution:	1	File ID:	EL.020612.203710
Sample Tag:	02	Units:	mg/L		
Analyte	CAS #	Result	Qual	LOQ	LOD
Cadmium, Total	7440-43-9	0.0612		0.000600	0.000300

Sample #:	L12020016-03	PrePrep Method:	N/A	Instrument:	HYDRA
Client ID:	MPL4-0112-MSD	Prep Method:	7470A	Prep Date:	02/03/2012 07:48
Matrix:	Water	Analytical Method:	7470A	Cal Date:	02/03/2012 13:16
Workgroup #:	WG388741	Analyst:	PDM	Run Date:	02/03/2012 13:40
Collect Date:	01/30/2012 13:55	Dilution:	1	File ID:	HY.020312.134045
Sample Tag:	01	Units:	mg/L		
Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6	0.00470		0.000222	0.000111

Sample #:	L12020016-03	PrePrep Method:	N/A	Instrument:	IC2
Client ID:	MPL4-0112-MSD	Prep Method:	300.0	Prep Date:	02/03/2012 13:04
Matrix:	Water	Analytical Method:	300.0	Cal Date:	12/21/2011 13:49
Workgroup #:	WG388787	Analyst:	JBK	Run Date:	02/03/2012 16:08
Collect Date:	01/30/2012 13:55	Dilution:	4	File ID:	I20203121608.13
Sample Tag:	DL01	Units:	mg/L		
Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	68.3		0.800	0.400

## Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Fluoride	16984-48-8	7.00		0.800	0.400
Sulfate	14808-79-8	184		4.00	2.00

Sample #: L12020016-03	PrePrep Method: N/A	Instrument: ORION-4STAR			
Client ID: MPL4-0112-MSD	Prep Method: 9040C	Prep Date: N/A			
Matrix: Water	Analytical Method: 9040C	Cal Date:			
Workgroup #: WG388532	Analyst: TMM	Run Date: 02/01/2012 14:58			
Collect Date: 01/30/2012 13:55	Dilution: 1	File ID: OS12020615084501			
Sample Tag:	Units: UNITS				
Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.31		0.000	0.000

Sample #: L12020016-03	PrePrep Method: N/A	Instrument: SMARTCHEM			
Client ID: MPL4-0112-MSD	Prep Method: 310.2	Prep Date: N/A			
Matrix: Water	Analytical Method: 310.2	Cal Date: 02/03/2012 11:29			
Workgroup #: WG388663	Analyst: DIH	Run Date: 02/03/2012 11:45			
Collect Date: 01/30/2012 13:55	Dilution: 1	File ID: SC120203002.035			
Sample Tag: 01	Units: mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO <sub>3</sub> )		158		20.0	10.0

Sample #: L12020016-03	PrePrep Method: N/A	Instrument: SMARTCHEM			
Client ID: MPL4-0112-MSD	Prep Method: 310.2	Prep Date: N/A			
Matrix: Water	Analytical Method: 310.2	Cal Date: 02/03/2012 11:29			
Workgroup #: WG388663	Analyst: DIH	Run Date: 02/03/2012 11:45			
Collect Date: 01/30/2012 13:55	Dilution: 1	File ID: SC120203002.035			
Sample Tag: 01	Units: mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO <sub>3</sub> )			U	20.0	10.0
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

**Sample #:** L12020016-03

**Client ID:** MPL4-0112-MSD

**Matrix:** Water

**Workgroup #:** WG388663

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 310.2

**Analytical Method:** 310.2

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 11:29

**Run Date:** 02/03/2012 11:45

**File ID:** SC120203002.035

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		158		20.0	10.0

**Sample #:** L12020016-03

**Client ID:** MPL4-0112-MSD

**Matrix:** Water

**Workgroup #:** WG388635

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** CN-A

**PrePrep Method:** N/A

**Prep Method:** SM4500-CN-C,G

**Analytical Method:** SM4500-CN-C,G

**Analyst:** JBK

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 02/03/2012 13:25

**Run Date:** 02/03/2012 14:10

**File ID:** 1V.1202031410-12

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.318		0.0100	0.00500

**Sample #:** L12020016-03

**Client ID:** MPL4-0112-MSD

**Matrix:** Water

**Workgroup #:** WG388947

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** wd

**PrePrep Method:** N/A

**Prep Method:** SM4500-CN-I

**Analytical Method:** SM4500-CN-I

**Analyst:** JBK

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 02/08/2012 08:20

**Run Date:** 02/08/2012 08:40

**File ID:** 1V.1202080840-10

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.244		0.0100	0.00500

**Sample #:** L12020016-03

**Client ID:** MPL4-0112-MSD

**Matrix:** Water

**Workgroup #:** WG388634

**Collect Date:** 01/30/2012 13:55

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 9014-9010C

**Analytical Method:** 9014-9010C

**Analyst:** JBK

**Dilution:** 2

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 02/03/2012 13:20

**Run Date:** 02/03/2012 13:30

**File ID:** 1V.1202031330-09

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.559		0.0200	0.0100

## Certificate of Analysis

<b>Sample #:</b> L12020016-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> YSI-32			
<b>Client ID:</b> MPL4-0112-MSD	<b>Prep Method:</b> 120.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 120.1	<b>Cal Date:</b>			
<b>Workgroup #:</b> WG388884	<b>Analyst:</b> DLP	<b>Run Date:</b> 02/06/2012 14:30			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> 32.1202061430-09			
<b>Sample Tag:</b>	<b>Units:</b> umhos/cm				
Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		803		1.00	0.500

<b>Sample #:</b> L12020016-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL4-0112-MSD	<b>Prep Method:</b> 420.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 420.1	<b>Cal Date:</b> 12/02/2011 12:40			
<b>Workgroup #:</b> WG389203	<b>Analyst:</b> DLP	<b>Run Date:</b> 02/09/2012 15:20			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202091520-08			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Phenolics, Total	64743-03-9	0.490		0.00500	0.00300

<b>Sample #:</b> L12020016-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL4-0112-MSD	<b>Prep Method:</b> 350.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 350.1	<b>Cal Date:</b> 02/07/2012 08:29			
<b>Workgroup #:</b> WG388904	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/07/2012 08:56			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 1	<b>File ID:</b> SC120207001.036			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7	1.00		0.100	0.0500

<b>Sample #:</b> L12020016-03	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL4-0112-MSD	<b>Prep Method:</b> 353.2	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 353.2	<b>Cal Date:</b> 02/03/2012 13:00			
<b>Workgroup #:</b> WG388788	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/06/2012 09:16			
<b>Collect Date:</b> 01/30/2012 13:55	<b>Dilution:</b> 8	<b>File ID:</b> SC12020614500201			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		8.99		0.400	0.200

## Certificate of Analysis

**Sample #:** L12020016-03

**Client ID:** MPL4-0112-MSD

**Matrix:** Water

**Workgroup #:** WG388496

**Collect Date:** 01/30/2012 13:55

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** SM4500-P-E-20th

**Analytical Method:** SM4500-P-E-20th

**Analyst:** HJR

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 12/21/2011 14:35

**Run Date:** 02/01/2012 10:45

**File ID:** 1V.1202011045-11

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.840		0.0500	0.0250

**Sample #:** L12020016-03

**Client ID:** MPL4-0112-MSD

**Matrix:** Water

**Workgroup #:** WG388589

**Collect Date:** 01/30/2012 13:55

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 160.1/SM2540C

**Analytical Method:** 160.1

**Analyst:** HJR

**Dilution:** 1

**Units:** mg/L

**Instrument:** OVEN

**Prep Date:** N/A

**Cal Date:**

**Run Date:** 02/02/2012 14:40

**File ID:** EN.1202021440-09

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		980		20.0	10.0

**Sample #:** L12020016-03

**Client ID:** MPL4-0112-MSD

**Matrix:** Water

**Workgroup #:** WG388670

**Collect Date:** 01/30/2012 13:55

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 415.1

**Analytical Method:** 415.1

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** TOC-VWP

**Prep Date:** 02/03/2012 11:31

**Cal Date:** 12/06/2011 09:40

**Run Date:** 02/03/2012 11:31

**File ID:** TC02032012.012

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		12.1		1.00	0.500

**Sample #:** L12020016-03

**Client ID:** MPL4-0112-MSD

**Matrix:** Water

**Workgroup #:** WG388588

**Collect Date:** 01/30/2012 13:55

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 160.2/SM2540D

**Analytical Method:** 160.2

**Analyst:** HJR

**Dilution:** 1

**Units:** mg/L

**Instrument:** OVEN

**Prep Date:** N/A

**Cal Date:**

**Run Date:** 02/02/2012 14:20

**File ID:** EN.1202021420-18

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Suspended Solids		28.5		5.00	2.50

## Certificate of Analysis

Sample #: L12020016-04

Client ID: MPL2-0112-1

Matrix: Water

Workgroup #: WG388564

Collect Date: 01/30/2012 17:05

Sample Tag: 01

PrePrep Method: N/A

Prep Method: 5030B/5030C/5035A

Analytical Method: 8260B

Analyst: TMB

Dilution: 1

Units: ug/L

Instrument: HPMS11

Prep Date: N/A

Cal Date: 01/19/2012 19:25

Run Date: 02/02/2012 18:14

File ID: 11M80883

Analyte	CAS #	Result	Qual	LOQ	LOD
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.200
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,1-Dichloroethene	75-35-4		U	1.00	0.500
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	2.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
2-Butanone	78-93-3		U	5.00	2.50
2-Chlorotoluene	95-49-8		U	1.00	0.125
2-Hexanone	591-78-6		U	5.00	2.50
4-Chlorotoluene	106-43-4		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Acetone	67-64-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125
Bromobenzene	108-86-1		U	1.00	0.125
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
Chloroform	67-66-3		U	1.00	0.125

## Certificate of Analysis

Analyte	CAS #	Result		Qual	LOQ	LOD
Chloromethane	74-87-3			U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2			U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5			U	1.00	0.250
Dichlorodifluoromethane	75-71-8			U	1.00	0.250
Ethylbenzene	100-41-4			U	1.00	0.250
Hexachlorobutadiene	87-68-3			U	1.00	0.250
Isopropylbenzene	98-82-8			U	1.00	0.250
Methyl t-butyl ether (MTBE)	1634-04-4			U	1.00	0.500
Methylene chloride	75-09-2			U	1.00	0.250
n-Butylbenzene	104-51-8			U	1.00	0.250
n-Propylbenzene	103-65-1			U	1.00	0.125
Naphthalene	91-20-3			U	1.00	0.200
sec-Butylbenzene	135-98-8			U	1.00	0.250
Styrene	100-42-5			U	1.00	0.125
tert-Butylbenzene	98-06-6			U	1.00	0.250
Tetrachloroethene	127-18-4			U	1.00	0.250
Toluene	108-88-3			U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5			U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6			U	1.00	0.500
Trichloroethene	79-01-6			U	1.00	0.250
Trichlorofluoromethane	75-69-4			U	1.00	0.250
Vinyl acetate	108-05-4			U	5.00	2.50
Vinyl chloride	75-01-4			U	1.00	0.250
Xylenes	1330-20-7			U	1.00	0.500
Surrogate	Recovery	Lower Limit	Upper Limit	Q		
1,2-Dichloroethane-d4	101	70	120			
4-Bromofluorobenzene	104	75	120			
Dibromofluoromethane	98.9	85	115			
Toluene-d8	102	85	120			
U	Analyte was not detected. The concentration is below the reported LOD.					

## Certificate of Analysis

Sample #: L12020016-04

Client ID: MPL2-0112-1

Matrix: Water

Workgroup #: WG388668

Collect Date: 01/30/2012 17:05

Sample Tag: 01

PrePrep Method: N/A

Prep Method: 3510C

Analytical Method: 8270C

Analyst: CAA

Dilution: 1

Units: ug/L

Instrument: HPMS7

Prep Date: 02/02/2012 13:00

Cal Date: 01/27/2012 12:22

Run Date: 02/03/2012 10:58

File ID: 7M54262

Analyte	CAS #	Result	Qual	LOQ	LOD
Naphthalene	91-20-3		U	0.0556	0.0278
Acenaphthylene	208-96-8		U	0.0556	0.0278
Acenaphthene	83-32-9		U	0.0556	0.0278
Fluorene	86-73-7		U	0.0556	0.0278
Phenanthrene	85-01-8		U	0.0556	0.0278
Anthracene	120-12-7		U	0.0556	0.0278
Fluoranthene	206-44-0		U	0.0556	0.0278
Pyrene	129-00-0		U	0.0556	0.0278
Benzo(a)anthracene	56-55-3		U	0.0556	0.0278
Chrysene	218-01-9		U	0.0556	0.0278
Benzo(b)fluoranthene	205-99-2		U	0.0556	0.0278
Benzo(k)fluoranthene	207-08-9		U	0.0556	0.0278
Benzo(a)pyrene	50-32-8		U	0.0556	0.0278
Indeno(1,2,3-cd)pyrene	193-39-5		U	0.0556	0.0278
Dibenz(a,h)anthracene	53-70-3		U	0.0556	0.0278
Benzo(g,h,i)perylene	191-24-2		U	0.0556	0.0278
1-Methylnaphthalene	90-12-0		U	0.0556	0.0278
2-Methylnaphthalene	91-57-6		U	0.0556	0.0278
Surrogate	Recovery	Lower Limit	Upper Limit	Q	
Nitrobenzene-d5	66.5	35	114		
2-Fluorobiphenyl	70.4	50	110		
p-Terphenyl-d14	99.9	33	141		
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #: L12020016-04

Client ID: MPL2-0112-1

Matrix: Water

Workgroup #: WG388695

Collect Date: 01/30/2012 17:05

Sample Tag: 01

PrePrep Method: N/A

Prep Method: 3510C

Analytical Method: 8082

Analyst: ECL

Dilution: 1

Units: ug/L

Instrument: HP9

Prep Date: 02/02/2012 08:30

Cal Date: 01/09/2012 12:41

Run Date: 02/03/2012 14:26

File ID: 9GF67009.F

Analyte	CAS #	Result	Qual	LOQ	LOD
Aroclor-1016	12674-11-2		U	0.526	0.263

## Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Aroclor-1221	11104-28-2		U	0.526	0.263
Aroclor-1232	11141-16-5		U	0.526	0.263
Aroclor-1242	53469-21-9		U	0.526	0.263
Aroclor-1248	12672-29-6		U	0.526	0.263
Aroclor-1254	11097-69-1		U	0.526	0.263
Aroclor-1260	11096-82-5		U	0.526	0.263
Surrogate	Recovery	Lower Limit	Upper Limit	Q	
2,4,5,6-Tetrachloro-m-xylene	52.3	30	132		
Decachlorobiphenyl	92.6	40	135		
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #: L12020016-04

PrePrep Method: N/A

Instrument: ICP-THERMO2

Client ID: MPL2-0112-1

Prep Method: 3005A

Prep Date: 02/03/2012 06:31

Matrix: Water

Analytical Method: 6010B

Cal Date: 02/07/2012 08:55

Workgroup #: WG388773

Analyst: EDL

Run Date: 02/07/2012 15:51

Collect Date: 01/30/2012 17:05

Dilution: 1

File ID: T2.020712.155149

Sample Tag: 01

Units: mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5		U	0.100	0.0500
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Boron, Total	7440-42-8		U	0.100	0.0500
Calcium, Total	7440-70-2	60.8		0.200	0.100
Iron, Total	7439-89-6	0.196		0.100	0.0500
Magnesium, Total	7439-95-4	11.1		0.500	0.250
Molybdenum, Total	7439-98-7		U	0.0100	0.00500
Potassium, Total	7440-09-7	2.66		1.00	0.500
Sodium, Total	7440-23-5	29.8		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

**Sample #:** L12020016-04

**Client ID:** MPL2-0112-1

**Matrix:** Water

**Workgroup #:** WG388710

**Collect Date:** 01/30/2012 17:05

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 3015

**Analytical Method:** 6020

**Analyst:** JYH

**Dilution:** 1

**Units:** mg/L

**Instrument:** ELAN-ICP

**Prep Date:** 02/03/2012 06:03

**Cal Date:** 02/06/2012 09:52

**Run Date:** 02/06/2012 11:52

**File ID:** EL.020612.115227

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00354		0.00100	0.000500
Barium, Total	7440-39-3	0.0622		0.00300	0.00150
Chromium, Total	7440-47-3	0.00221		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5		U	0.00200	0.00100
Nickel, Total	7440-02-0	0.00324	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.0137		0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100
J	Estimated value ; the analyte concentration was less than the LOQ.				
U	Analyte was not detected. The concentration is below the reported LOD.				

**Sample #:** L12020016-04

**Client ID:** MPL2-0112-1

**Matrix:** Water

**Workgroup #:** WG388710

**Collect Date:** 01/30/2012 17:05

**Sample Tag:** 03

**PrePrep Method:** N/A

**Prep Method:** 3015

**Analytical Method:** 6020

**Analyst:** JYH

**Dilution:** 1

**Units:** mg/L

**Instrument:** ELAN-ICP

**Prep Date:** 02/03/2012 06:03

**Cal Date:** 02/09/2012 09:14

**Run Date:** 02/09/2012 12:04

**File ID:** EL.020912.120425

Analyte	CAS #	Result	Qual	LOQ	LOD
Cadmium, Total	7440-43-9		U	0.000600	0.000300
Silver, Total	7440-22-4		U	0.00100	0.000500
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

**Sample #:** L12020016-04

**Client ID:** MPL2-0112-1

**Matrix:** Water

**Workgroup #:** WG388741

**Collect Date:** 01/30/2012 17:05

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 7470A

**Analytical Method:** 7470A

**Analyst:** PDM

**Dilution:** 1

**Units:** mg/L

**Instrument:** HYDRA

**Prep Date:** 02/03/2012 07:49

**Cal Date:** 02/03/2012 13:16

**Run Date:** 02/03/2012 13:42

**File ID:** HY.020312.134248

Analyte		CAS #	Result	Qual	LOQ	LOD
Mercury		7439-97-6		U	0.000200	0.000100
U	Analyte was not detected. The concentration is below the reported LOD.					

**Sample #:** L12020016-04

**Client ID:** MPL2-0112-1

**Matrix:** Water

**Workgroup #:** WG388787

**Collect Date:** 01/30/2012 17:05

**Sample Tag:** DL01

**PrePrep Method:** N/A

**Prep Method:** 300.0

**Analytical Method:** 300.0

**Analyst:** JBK

**Dilution:** 4

**Units:** mg/L

**Instrument:** IC2

**Prep Date:** 02/03/2012 13:04

**Cal Date:** 12/21/2011 13:49

**Run Date:** 02/03/2012 16:26

**File ID:** I20203121626.14

Analyte		CAS #	Result	Qual	LOQ	LOD
Chloride		16887-00-6	51.7		0.800	0.400
Fluoride		16984-48-8		U	0.800	0.400
Sulfate		14808-79-8	72.5		4.00	2.00
U	Analyte was not detected. The concentration is below the reported LOD.					

**Sample #:** L12020016-04

**Client ID:** MPL2-0112-1

**Matrix:** Water

**Workgroup #:** WG388532

**Collect Date:** 01/30/2012 17:05

**Sample Tag:**
**PrePrep Method:** N/A

**Prep Method:** 9040C

**Analytical Method:** 9040C

**Analyst:** TMM

**Dilution:** 1

**Units:** UNITS

**Instrument:** ORION-4STAR

**Prep Date:** N/A

**Cal Date:**
**Run Date:** 02/01/2012 14:59

**File ID:** OS12020615085101

Analyte		CAS #	Result	Qual	LOQ	LOD
Corrosivity pH		10-29-7	7.65		0.000	0.000

**Sample #:** L12020016-04

**Client ID:** MPL2-0112-1

**Matrix:** Water

**Workgroup #:** WG388663

**Collect Date:** 01/30/2012 17:05

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 310.2

**Analytical Method:** 310.2

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 11:29

**Run Date:** 02/03/2012 11:46

**File ID:** SC120203002.036

Analyte		CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)			103		20.0	10.0

## Certificate of Analysis

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> 310.2	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 310.2	<b>Cal Date:</b> 02/03/2012 11:29			
<b>Workgroup #:</b> WG388663	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/03/2012 11:46			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> SC120203002.036			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO <sub>3</sub> )			U	20.0	10.0
U	Analyte was not detected. The concentration is below the reported LOD.				

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> 310.2	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 310.2	<b>Cal Date:</b> 02/03/2012 11:29			
<b>Workgroup #:</b> WG388663	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/03/2012 11:46			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> SC120203002.036			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO <sub>3</sub> )		103		20.0	10.0

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> SM4500-CN-C,G	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-CN-C,G	<b>Cal Date:</b> 02/03/2012 13:25			
<b>Workgroup #:</b> WG388635	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/03/2012 14:10			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202031410-13			
<b>Sample Tag:</b> CN-A	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.228		0.0100	0.00500

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> 9014-9010C	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 9014-9010C	<b>Cal Date:</b> 02/03/2012 13:20			
<b>Workgroup #:</b> WG388634	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/03/2012 13:30			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202031330-10			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.247		0.0100	0.00500

## Certificate of Analysis

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> SM4500-CN-I	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-CN-I	<b>Cal Date:</b> 02/08/2012 08:25			
<b>Workgroup #:</b> WG388947	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/08/2012 08:40			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202080840-11			
<b>Sample Tag:</b> wd	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0356		0.0100	0.00500

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> YSI-32			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> 120.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 120.1	<b>Cal Date:</b>			
<b>Workgroup #:</b> WG388884	<b>Analyst:</b> DLP	<b>Run Date:</b> 02/06/2012 14:30			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> 32.1202061430-10			
<b>Sample Tag:</b>	<b>Units:</b> umhos/cm				
Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		563		1.00	0.500

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> 420.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 420.1	<b>Cal Date:</b> 12/02/2011 12:50			
<b>Workgroup #:</b> WG389203	<b>Analyst:</b> DLP	<b>Run Date:</b> 02/09/2012 15:20			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202091520-09			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Phenolics, Total	64743-03-9		U	0.00556	0.00333
U	Analyte was not detected. The concentration is below the reported LOD.				

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> 350.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 350.1	<b>Cal Date:</b> 02/07/2012 08:29			
<b>Workgroup #:</b> WG388906	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/07/2012 09:00			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> SC120207001.041			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7		U	0.100	0.0500
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> 353.2	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 353.2	<b>Cal Date:</b> 02/03/2012 13:00			
<b>Workgroup #:</b> WG388788	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/06/2012 09:16			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 4	<b>File ID:</b> SC12020614501001			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		6.77		0.200	0.100

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> SM4500-P-E-20th	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-P-E-20th	<b>Cal Date:</b> 12/21/2011 14:35			
<b>Workgroup #:</b> WG388496	<b>Analyst:</b> HJR	<b>Run Date:</b> 02/01/2012 10:45			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202011045-12			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.199		0.0500	0.0250

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> OVEN			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> 160.1/SM2540C	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 160.1	<b>Cal Date:</b>			
<b>Workgroup #:</b> WG388589	<b>Analyst:</b> HJR	<b>Run Date:</b> 02/02/2012 14:40			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> EN.1202021440-10			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		330		20.0	10.0

<b>Sample #:</b> L12020016-04	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> TOC-VWP			
<b>Client ID:</b> MPL2-0112-1	<b>Prep Method:</b> 415.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 415.1	<b>Cal Date:</b> 12/06/2011 09:40			
<b>Workgroup #:</b> WG388670	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/03/2012 12:51			
<b>Collect Date:</b> 01/30/2012 17:05	<b>Dilution:</b> 1	<b>File ID:</b> TC02032012.017			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		2.79		1.00	0.500

## Certificate of Analysis

**Sample #:** L12020016-04**Client ID:** MPL2-0112-1**Matrix:** Water**Workgroup #:** WG388588**Collect Date:** 01/30/2012 17:05**Sample Tag:****PrePrep Method:** N/A**Prep Method:** 160.2/SM2540D**Analytical Method:** 160.2**Analyst:** HJR**Dilution:** 1**Units:** mg/L**Instrument:** OVEN**Prep Date:** N/A**Cal Date:****Run Date:** 02/02/2012 14:20**File ID:** EN.1202021420-19

<b>Analyte</b>	<b>CAS #</b>	<b>Result</b>	<b>Qual</b>	<b>LOQ</b>	<b>LOD</b>
Total Suspended Solids			U	5.00	2.50

**Sample #:** L12020016-05**Client ID:** MPL3-0112-1**Matrix:** Water**Workgroup #:** WG388564**Collect Date:** 01/31/2012 10:15**Sample Tag:** 01**PrePrep Method:** N/A**Prep Method:** 5030B/5030C/5035A**Analytical Method:** 8260B**Analyst:** TMB**Dilution:** 1**Units:** ug/L**Instrument:** HPMS11**Prep Date:** N/A**Cal Date:** 01/19/2012 19:25**Run Date:** 02/02/2012 18:45**File ID:** 11M80884

<b>Analyte</b>	<b>CAS #</b>	<b>Result</b>	<b>Qual</b>	<b>LOQ</b>	<b>LOD</b>
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.200
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,1-Dichloroethene	75-35-4		U	1.00	0.500
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	2.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
2-Butanone	78-93-3		U	5.00	2.50
2-Chlorotoluene	95-49-8		U	1.00	0.125
2-Hexanone	591-78-6		U	5.00	2.50
4-Chlorotoluene	106-43-4		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Acetone	67-64-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125

## Certificate of Analysis

Analyte	CAS #	Result	Qual	LOQ	LOD
Bromobenzene	108-86-1		U	1.00	0.125
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
Chloroform	67-66-3	0.131	J	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
Dichlorodifluoromethane	75-71-8		U	1.00	0.250
Ethylbenzene	100-41-4		U	1.00	0.250
Hexachlorobutadiene	87-68-3		U	1.00	0.250
Isopropylbenzene	98-82-8		U	1.00	0.250
Methyl t-butyl ether (MTBE)	1634-04-4		U	1.00	0.500
Methylene chloride	75-09-2		U	1.00	0.250
n-Butylbenzene	104-51-8		U	1.00	0.250
n-Propylbenzene	103-65-1		U	1.00	0.125
Naphthalene	91-20-3		U	1.00	0.200
sec-Butylbenzene	135-98-8		U	1.00	0.250
Styrene	100-42-5		U	1.00	0.125
tert-Butylbenzene	98-06-6		U	1.00	0.250
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
Trichloroethene	79-01-6		U	1.00	0.250
Trichlorofluoromethane	75-69-4		U	1.00	0.250
Vinyl acetate	108-05-4		U	5.00	2.50
Vinyl chloride	75-01-4		U	1.00	0.250
Xylenes	1330-20-7		U	1.00	0.500
Surrogate	Recovery	Lower Limit	Upper Limit	Q	
1,2-Dichloroethane-d4	101	70	120		
4-Bromofluorobenzene	105	75	120		
Dibromofluoromethane	98.4	85	115		
Toluene-d8	102	85	120		

## Certificate of Analysis

J	Estimated value ; the analyte concentration was less than the LOQ.
U	Analyte was not detected. The concentration is below the reported LOD.

Sample #:	L12020016-05	PrePrep Method:	N/A	Instrument:	HPMS7
Client ID:	MPL3-0112-1	Prep Method:	3510C	Prep Date:	02/02/2012 13:00
Matrix:	Water	Analytical Method:	8270C	Cal Date:	01/27/2012 12:22
Workgroup #:	WG388668	Analyst:	CAA	Run Date:	02/03/2012 11:24
Collect Date:	01/31/2012 10:15	Dilution:	1	File ID:	7M54263
Sample Tag:	01	Units:	ug/L		

Analyte	CAS #	Result	Qual	LOQ	LOD
Naphthalene	91-20-3		U	0.0549	0.0275
Acenaphthylene	208-96-8		U	0.0549	0.0275
Acenaphthene	83-32-9		U	0.0549	0.0275
Fluorene	86-73-7		U	0.0549	0.0275
Phenanthrene	85-01-8		U	0.0549	0.0275
Anthracene	120-12-7		U	0.0549	0.0275
Fluoranthene	206-44-0		U	0.0549	0.0275
Pyrene	129-00-0		U	0.0549	0.0275
Benzo(a)anthracene	56-55-3		U	0.0549	0.0275
Chrysene	218-01-9		U	0.0549	0.0275
Benzo(b)fluoranthene	205-99-2		U	0.0549	0.0275
Benzo(k)fluoranthene	207-08-9		U	0.0549	0.0275
Benzo(a)pyrene	50-32-8		U	0.0549	0.0275
Indeno(1,2,3-cd)pyrene	193-39-5		U	0.0549	0.0275
Dibenzo(a,h)anthracene	53-70-3		U	0.0549	0.0275
Benzo(g,h,i)perylene	191-24-2		U	0.0549	0.0275
1-Methylnaphthalene	90-12-0		U	0.0549	0.0275
2-Methylnaphthalene	91-57-6		U	0.0549	0.0275

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Nitrobenzene-d5	73.1	35	114	
2-Fluorobiphenyl	67.9	50	110	
p-Terphenyl-d14	94.7	33	141	

U	Analyte was not detected. The concentration is below the reported LOD.
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## Certificate of Analysis

**Sample #:** L12020016-05

**PrePrep Method:** N/A

**Instrument:** HP9

**Client ID:** MPL3-0112-1

**Prep Method:** 3510C

**Prep Date:** 02/02/2012 08:30

**Matrix:** Water

**Analytical Method:** 8082

**Cal Date:** 01/09/2012 12:41

**Workgroup #:** WG388695

**Analyst:** ECL

**Run Date:** 02/03/2012 14:44

**Collect Date:** 01/31/2012 10:15

**Dilution:** 1

**File ID:** 9GF67010.F

**Sample Tag:** 01

**Units:** ug/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Aroclor-1016	12674-11-2		U	0.543	0.272
Aroclor-1221	11104-28-2		U	0.543	0.272
Aroclor-1232	11141-16-5		U	0.543	0.272
Aroclor-1242	53469-21-9		U	0.543	0.272
Aroclor-1248	12672-29-6		U	0.543	0.272
Aroclor-1254	11097-69-1		U	0.543	0.272
Aroclor-1260	11096-82-5		U	0.543	0.272
Surrogate	Recovery	Lower Limit	Upper Limit	Q	
2,4,5,6-Tetrachloro-m-xylene	60.6	30	132		
Decachlorobiphenyl	92.9	40	135		

U	Analyte was not detected. The concentration is below the reported LOD.
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**Sample #:** L12020016-05

**PrePrep Method:** N/A

**Instrument:** ICP-THERMO2

**Client ID:** MPL3-0112-1

**Prep Method:** 3005A

**Prep Date:** 02/03/2012 06:31

**Matrix:** Water

**Analytical Method:** 6010B

**Cal Date:** 02/07/2012 08:55

**Workgroup #:** WG388773

**Analyst:** EDL

**Run Date:** 02/07/2012 15:55

**Collect Date:** 01/31/2012 10:15

**Dilution:** 1

**File ID:** T2.020712.155509

**Sample Tag:** 01

**Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	0.507		0.100	0.0500
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Boron, Total	7440-42-8		U	0.100	0.0500
Calcium, Total	7440-70-2	77.4		0.200	0.100
Iron, Total	7439-89-6	0.592		0.100	0.0500
Magnesium, Total	7439-95-4	14.3		0.500	0.250
Molybdenum, Total	7439-98-7		U	0.0100	0.00500
Potassium, Total	7440-09-7	2.94		1.00	0.500
Sodium, Total	7440-23-5	34.6		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6	0.0547		0.0200	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.
---	--

## Certificate of Analysis

Sample #: L12020016-05

Client ID: MPL3-0112-1

Matrix: Water

Workgroup #: WG388710

Collect Date: 01/31/2012 10:15

Sample Tag: 02

PrePrep Method: N/A

Prep Method: 3015

Analytical Method: 6020

Analyst: JYH

Dilution: 1

Units: mg/L

Instrument: ELAN-ICP

Prep Date: 02/03/2012 06:03

Cal Date: 02/06/2012 16:22

Run Date: 02/06/2012 21:23

File ID: EL.020612.212330

Analyte	CAS #	Result	Qual	LOQ	LOD
Cadmium, Total	7440-43-9		U	0.000600	0.000300
U	Analyte was not detected. The concentration is below the reported LOD.				

Sample #: L12020016-05

Client ID: MPL3-0112-1

Matrix: Water

Workgroup #: WG388710

Collect Date: 01/31/2012 10:15

Sample Tag: 01

PrePrep Method: N/A

Prep Method: 3015

Analytical Method: 6020

Analyst: JYH

Dilution: 1

Units: mg/L

Instrument: ELAN-ICP

Prep Date: 02/03/2012 06:03

Cal Date: 02/06/2012 09:52

Run Date: 02/06/2012 12:54

File ID: EL.020612.125419

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00149		0.00100	0.000500
Barium, Total	7440-39-3	0.0517		0.00300	0.00150
Chromium, Total	7440-47-3	0.00235		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1	0.000829	J	0.00100	0.000500
Manganese, Total	7439-96-5	0.0150		0.00200	0.00100
Nickel, Total	7440-02-0	0.00381	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00568		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100
J	Estimated value ; the analyte concentration was less than the LOQ.				
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

**Sample #:** L12020016-05

**Client ID:** MPL3-0112-1

**Matrix:** Water

**Workgroup #:** WG388741

**Collect Date:** 01/31/2012 10:15

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 7470A

**Analytical Method:** 7470A

**Analyst:** PDM

**Dilution:** 1

**Units:** mg/L

**Instrument:** HYDRA

**Prep Date:** 02/03/2012 07:49

**Cal Date:** 02/03/2012 13:16

**Run Date:** 02/03/2012 13:44

**File ID:** HY.020312.134442

Analyte		CAS #	Result	Qual	LOQ	LOD
Mercury		7439-97-6		U	0.000200	0.000100
U	Analyte was not detected. The concentration is below the reported LOD.					

**Sample #:** L12020016-05

**Client ID:** MPL3-0112-1

**Matrix:** Water

**Workgroup #:** WG388787

**Collect Date:** 01/31/2012 10:15

**Sample Tag:** DL01

**PrePrep Method:** N/A

**Prep Method:** 300.0

**Analytical Method:** 300.0

**Analyst:** JBK

**Dilution:** 4

**Units:** mg/L

**Instrument:** IC2

**Prep Date:** 02/03/2012 13:04

**Cal Date:** 12/21/2011 13:49

**Run Date:** 02/03/2012 17:22

**File ID:** I20203121722.17

Analyte		CAS #	Result	Qual	LOQ	LOD
Chloride		16887-00-6	57.9		0.800	0.400
Fluoride		16984-48-8		U	0.800	0.400
Sulfate		14808-79-8	111		4.00	2.00
U	Analyte was not detected. The concentration is below the reported LOD.					

**Sample #:** L12020016-05

**Client ID:** MPL3-0112-1

**Matrix:** Water

**Workgroup #:** WG388532

**Collect Date:** 01/31/2012 10:15

**Sample Tag:**
**PrePrep Method:** N/A

**Prep Method:** 9040C

**Analytical Method:** 9040C

**Analyst:** TMM

**Dilution:** 1

**Units:** UNITS

**Instrument:** ORION-4STAR

**Prep Date:** N/A

**Cal Date:**
**Run Date:** 02/01/2012 15:02

**File ID:** OS12020615085701

Analyte		CAS #	Result	Qual	LOQ	LOD
Corrosivity pH		10-29-7	7.47		0.000	0.000

**Sample #:** L12020016-05

**Client ID:** MPL3-0112-1

**Matrix:** Water

**Workgroup #:** WG388663

**Collect Date:** 01/31/2012 10:15

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 310.2

**Analytical Method:** 310.2

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 11:29

**Run Date:** 02/03/2012 11:47

**File ID:** SC120203002.037

Analyte		CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)			122		20.0	10.0

## Certificate of Analysis

**Sample #:** L12020016-05

**Client ID:** MPL3-0112-1

**Matrix:** Water

**Workgroup #:** WG388663

**Collect Date:** 01/31/2012 10:15

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 310.2

**Analytical Method:** 310.2

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 11:29

**Run Date:** 02/03/2012 11:47

**File ID:** SC120203002.037

### Analyte

**CAS #**

**Result**

**Qual**

**LOQ**

**LOD**

Alkalinity, Carbonate (as CaCO<sub>3</sub>)

U 20.0 10.0

U

Analyte was not detected. The concentration is below the reported LOD.

**Sample #:** L12020016-05

**Client ID:** MPL3-0112-1

**Matrix:** Water

**Workgroup #:** WG388663

**Collect Date:** 01/31/2012 10:15

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 310.2

**Analytical Method:** 310.2

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 11:29

**Run Date:** 02/03/2012 11:47

**File ID:** SC120203002.037

### Analyte

**CAS #**

**Result**

**Qual**

**LOQ**

**LOD**

Alkalinity, Total (as CaCO<sub>3</sub>)

122 20.0 10.0

**Sample #:** L12020016-05

**Client ID:** MPL3-0112-1

**Matrix:** Water

**Workgroup #:** WG388634

**Collect Date:** 01/31/2012 10:15

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 9014-9010C

**Analytical Method:** 9014-9010C

**Analyst:** JBK

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 02/03/2012 13:20

**Run Date:** 02/03/2012 13:30

**File ID:** 1V.1202031330-11

### Analyte

**CAS #**

**Result**

**Qual**

**LOQ**

**LOD**

Cyanide

57-12-5 0.234

0.0100 0.00500

**Sample #:** L12020016-05

**Client ID:** MPL3-0112-1

**Matrix:** Water

**Workgroup #:** WG388947

**Collect Date:** 01/31/2012 10:15

**Sample Tag:** wd

**PrePrep Method:** N/A

**Prep Method:** SM4500-CN-I

**Analytical Method:** SM4500-CN-I

**Analyst:** JBK

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 02/08/2012 08:25

**Run Date:** 02/08/2012 08:40

**File ID:** 1V.1202080840-12

### Analyte

**CAS #**

**Result**

**Qual**

**LOQ**

**LOD**

Cyanide, Weak/Dissociable

57-12-5 0.0393

0.0100 0.00500

## Certificate of Analysis

<b>Sample #:</b> L12020016-05	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL3-0112-1	<b>Prep Method:</b> SM4500-CN-C,G	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-CN-C,G	<b>Cal Date:</b> 02/03/2012 13:25			
<b>Workgroup #:</b> WG388635	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/03/2012 14:10			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202031410-14			
<b>Sample Tag:</b> CN-A	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.220		0.0100	0.00500

<b>Sample #:</b> L12020016-05	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> YSI-32			
<b>Client ID:</b> MPL3-0112-1	<b>Prep Method:</b> 120.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 120.1	<b>Cal Date:</b>			
<b>Workgroup #:</b> WG388884	<b>Analyst:</b> DLP	<b>Run Date:</b> 02/06/2012 14:30			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> 32.1202061430-11			
<b>Sample Tag:</b>	<b>Units:</b> umhos/cm				
Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		679		1.00	0.500

<b>Sample #:</b> L12020016-05	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL3-0112-1	<b>Prep Method:</b> 420.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 420.1	<b>Cal Date:</b> 12/02/2011 12:50			
<b>Workgroup #:</b> WG389203	<b>Analyst:</b> DLP	<b>Run Date:</b> 02/09/2012 15:20			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202091520-10			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Phenolics, Total	64743-03-9		U	0.00556	0.00333
U	Analyte was not detected. The concentration is below the reported LOD.				

<b>Sample #:</b> L12020016-05	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL3-0112-1	<b>Prep Method:</b> 350.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 350.1	<b>Cal Date:</b> 02/07/2012 08:29			
<b>Workgroup #:</b> WG388906	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/07/2012 09:03			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> SC120207001.044			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7		U	0.100	0.0500
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

<b>Sample #:</b> L12020016-05	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL3-0112-1	<b>Prep Method:</b> 353.2	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 353.2	<b>Cal Date:</b> 02/03/2012 13:00			
<b>Workgroup #:</b> WG388788	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/06/2012 09:16			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 8	<b>File ID:</b> SC12020614502001			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		7.82		0.400	0.200

<b>Sample #:</b> L12020016-05	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL3-0112-1	<b>Prep Method:</b> SM4500-P-E-20th	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-P-E-20th	<b>Cal Date:</b> 12/21/2011 14:35			
<b>Workgroup #:</b> WG388496	<b>Analyst:</b> HJR	<b>Run Date:</b> 02/01/2012 10:45			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202011045-13			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.132		0.0500	0.0250

<b>Sample #:</b> L12020016-05	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> OVEN			
<b>Client ID:</b> MPL3-0112-1	<b>Prep Method:</b> 160.1/SM2540C	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 160.1	<b>Cal Date:</b>			
<b>Workgroup #:</b> WG388589	<b>Analyst:</b> HJR	<b>Run Date:</b> 02/02/2012 14:40			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> EN.1202021440-11			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		408		20.0	10.0

<b>Sample #:</b> L12020016-05	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> TOC-VWP			
<b>Client ID:</b> MPL3-0112-1	<b>Prep Method:</b> 415.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 415.1	<b>Cal Date:</b> 12/06/2011 09:40			
<b>Workgroup #:</b> WG388670	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/03/2012 13:04			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> TC02032012.018			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		3.36		1.00	0.500

## Certificate of Analysis

**Sample #:** L12020016-05**Client ID:** MPL3-0112-1**Matrix:** Water**Workgroup #:** WG388588**Collect Date:** 01/31/2012 10:15**Sample Tag:****PrePrep Method:** N/A**Prep Method:** 160.2/SM2540D**Analytical Method:** 160.2**Analyst:** HJR**Dilution:** 1**Units:** mg/L**Instrument:** OVEN**Prep Date:** N/A**Cal Date:****Run Date:** 02/02/2012 14:20**File ID:** EN.1202021420-20

<b>Analyte</b>	<b>CAS #</b>	<b>Result</b>	<b>Qual</b>	<b>LOQ</b>	<b>LOD</b>
Total Suspended Solids		13.0		5.00	2.50

**Sample #:** L12020016-06**Client ID:** MPL3-0112-2**Matrix:** Water**Workgroup #:** WG388564**Collect Date:** 01/31/2012 10:15**Sample Tag:** 01**PrePrep Method:** N/A**Prep Method:** 5030B/5030C/5035A**Analytical Method:** 8260B**Analyst:** TMB**Dilution:** 1**Units:** ug/L**Instrument:** HPMS11**Prep Date:** N/A**Cal Date:** 01/19/2012 19:25**Run Date:** 02/02/2012 19:16**File ID:** 11M80885

<b>Analyte</b>	<b>CAS #</b>	<b>Result</b>	<b>Qual</b>	<b>LOQ</b>	<b>LOD</b>
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.200
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,1-Dichloroethene	75-35-4		U	1.00	0.500
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	2.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
2-Butanone	78-93-3		U	5.00	2.50
2-Chlorotoluene	95-49-8		U	1.00	0.125
2-Hexanone	591-78-6		U	5.00	2.50
4-Chlorotoluene	106-43-4		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Acetone	67-64-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125

## Certificate of Analysis

Analyte	CAS #	Result		Qual	LOQ	LOD
Bromobenzene	108-86-1			U	1.00	0.125
Bromodichloromethane	75-27-4			U	1.00	0.250
Bromoform	75-25-2			U	1.00	0.500
Bromomethane	74-83-9			U	1.00	0.500
Carbon disulfide	75-15-0			U	1.00	0.500
Carbon tetrachloride	56-23-5			U	1.00	0.250
Chlorobenzene	108-90-7			U	1.00	0.125
Chlorodibromomethane	124-48-1			U	1.00	0.250
Chloroethane	75-00-3			U	1.00	0.500
Chloroform	67-66-3			U	1.00	0.125
Chloromethane	74-87-3			U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2			U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5			U	1.00	0.250
Dichlorodifluoromethane	75-71-8			U	1.00	0.250
Ethylbenzene	100-41-4			U	1.00	0.250
Hexachlorobutadiene	87-68-3			U	1.00	0.250
Isopropylbenzene	98-82-8			U	1.00	0.250
Methyl t-butyl ether (MTBE)	1634-04-4			U	1.00	0.500
Methylene chloride	75-09-2			U	1.00	0.250
n-Butylbenzene	104-51-8			U	1.00	0.250
n-Propylbenzene	103-65-1			U	1.00	0.125
Naphthalene	91-20-3			U	1.00	0.200
sec-Butylbenzene	135-98-8			U	1.00	0.250
Styrene	100-42-5			U	1.00	0.125
tert-Butylbenzene	98-06-6			U	1.00	0.250
Tetrachloroethene	127-18-4			U	1.00	0.250
Toluene	108-88-3			U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5			U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6			U	1.00	0.500
Trichloroethene	79-01-6			U	1.00	0.250
Trichlorofluoromethane	75-69-4			U	1.00	0.250
Vinyl acetate	108-05-4			U	5.00	2.50
Vinyl chloride	75-01-4			U	1.00	0.250
Xylenes	1330-20-7			U	1.00	0.500
Surrogate	Recovery	Lower Limit	Upper Limit	Q		
1,2-Dichloroethane-d4	101	70	120			
4-Bromofluorobenzene	104	75	120			
Dibromofluoromethane	98.6	85	115			
Toluene-d8	101	85	120			

## Certificate of Analysis

U	Analyte was not detected. The concentration is below the reported LOD.
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Sample #: L12020016-06	PrePrep Method: N/A	Instrument: HPMS7
Client ID: MPL3-0112-2	Prep Method: 3510C	Prep Date: 02/02/2012 13:00
Matrix: Water	Analytical Method: 8270C	Cal Date: 01/27/2012 12:22
Workgroup #: WG388668	Analyst: CAA	Run Date: 02/03/2012 11:50
Collect Date: 01/31/2012 10:15	Dilution: 1	File ID: 7M54264
Sample Tag: 01	Units: ug/L	

Analyte	CAS #	Result	Qual	LOQ	LOD
Naphthalene	91-20-3		U	0.0556	0.0278
Acenaphthylene	208-96-8		U	0.0556	0.0278
Acenaphthene	83-32-9		U	0.0556	0.0278
Fluorene	86-73-7		U	0.0556	0.0278
Phenanthrene	85-01-8		U	0.0556	0.0278
Anthracene	120-12-7		U	0.0556	0.0278
Fluoranthene	206-44-0		U	0.0556	0.0278
Pyrene	129-00-0		U	0.0556	0.0278
Benzo(a)anthracene	56-55-3		U	0.0556	0.0278
Chrysene	218-01-9		U	0.0556	0.0278
Benzo(b)fluoranthene	205-99-2		U	0.0556	0.0278
Benzo(k)fluoranthene	207-08-9		U	0.0556	0.0278
Benzo(a)pyrene	50-32-8		U	0.0556	0.0278
Indeno(1,2,3-cd)pyrene	193-39-5		U	0.0556	0.0278
Dibenz(a,h)anthracene	53-70-3		U	0.0556	0.0278
Benzo(g,h,i)perylene	191-24-2		U	0.0556	0.0278
1-Methylnaphthalene	90-12-0		U	0.0556	0.0278
2-Methylnaphthalene	91-57-6		U	0.0556	0.0278

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Nitrobenzene-d5	92.4	35	114	
2-Fluorobiphenyl	96.7	50	110	
p-Terphenyl-d14	103	33	141	

U	Analyte was not detected. The concentration is below the reported LOD.
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## Certificate of Analysis

**Sample #:** L12020016-06

**PrePrep Method:** N/A

**Instrument:** HP9

**Client ID:** MPL3-0112-2

**Prep Method:** 3510C

**Prep Date:** 02/02/2012 08:30

**Matrix:** Water

**Analytical Method:** 8082

**Cal Date:** 01/09/2012 12:41

**Workgroup #:** WG388695

**Analyst:** ECL

**Run Date:** 02/03/2012 15:04

**Collect Date:** 01/31/2012 10:15

**Dilution:** 1

**File ID:** 9GF67011.F

**Sample Tag:** 01

**Units:** ug/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Aroclor-1016	12674-11-2		U	0.543	0.272
Aroclor-1221	11104-28-2		U	0.543	0.272
Aroclor-1232	11141-16-5		U	0.543	0.272
Aroclor-1242	53469-21-9		U	0.543	0.272
Aroclor-1248	12672-29-6		U	0.543	0.272
Aroclor-1254	11097-69-1		U	0.543	0.272
Aroclor-1260	11096-82-5		U	0.543	0.272
Surrogate	Recovery	Lower Limit	Upper Limit	Q	
2,4,5,6-Tetrachloro-m-xylene	55.0	30	132		
Decachlorobiphenyl	82.4	40	135		

U Analyte was not detected. The concentration is below the reported LOD.

**Sample #:** L12020016-06

**PrePrep Method:** N/A

**Instrument:** ICP-THERMO2

**Client ID:** MPL3-0112-2

**Prep Method:** 3005A

**Prep Date:** 02/03/2012 06:31

**Matrix:** Water

**Analytical Method:** 6010B

**Cal Date:** 02/07/2012 08:55

**Workgroup #:** WG388773

**Analyst:** EDL

**Run Date:** 02/07/2012 15:58

**Collect Date:** 01/31/2012 10:15

**Dilution:** 1

**File ID:** T2.020712.155829

**Sample Tag:** 01

**Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5	0.118		0.100	0.0500
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Boron, Total	7440-42-8		U	0.100	0.0500
Calcium, Total	7440-70-2	77.5		0.200	0.100
Iron, Total	7439-89-6	0.298		0.100	0.0500
Magnesium, Total	7439-95-4	14.2		0.500	0.250
Molybdenum, Total	7439-98-7		U	0.0100	0.00500
Potassium, Total	7440-09-7	2.86		1.00	0.500
Sodium, Total	7440-23-5	34.7		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6	0.0216		0.0200	0.0100

U Analyte was not detected. The concentration is below the reported LOD.

## Certificate of Analysis

<b>Sample #:</b> L12020016-06	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ELAN-ICP
<b>Client ID:</b> MPL3-0112-2	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 02/03/2012 06:03
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020	<b>Cal Date:</b> 02/06/2012 09:52
<b>Workgroup #:</b> WG388710	<b>Analyst:</b> JYH	<b>Run Date:</b> 02/06/2012 13:02
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> EL.020612.130207
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00137		0.00100	0.000500
Barium, Total	7440-39-3	0.0503		0.00300	0.00150
Chromium, Total	7440-47-3	0.00195	J	0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5	0.00396		0.00200	0.00100
Nickel, Total	7440-02-0	0.00317	J	0.00400	0.00200
Selenium, Total	7782-49-2	0.00514		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100
J	Estimated value ; the analyte concentration was less than the LOQ.				
U	Analyte was not detected. The concentration is below the reported LOD.				

<b>Sample #:</b> L12020016-06	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> ELAN-ICP
<b>Client ID:</b> MPL3-0112-2	<b>Prep Method:</b> 3015	<b>Prep Date:</b> 02/03/2012 06:03
<b>Matrix:</b> Water	<b>Analytical Method:</b> 6020	<b>Cal Date:</b> 02/06/2012 16:22
<b>Workgroup #:</b> WG388710	<b>Analyst:</b> JYH	<b>Run Date:</b> 02/06/2012 21:31
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> EL.020612.213117
<b>Sample Tag:</b> 02	<b>Units:</b> mg/L	

Analyte	CAS #	Result	Qual	LOQ	LOD
Cadmium, Total	7440-43-9		U	0.000600	0.000300
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

**Sample #:** L12020016-06

**Client ID:** MPL3-0112-2

**Matrix:** Water

**Workgroup #:** WG388741

**Collect Date:** 01/31/2012 10:15

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 7470A

**Analytical Method:** 7470A

**Analyst:** PDM

**Dilution:** 1

**Units:** mg/L

**Instrument:** HYDRA

**Prep Date:** 02/03/2012 07:49

**Cal Date:** 02/03/2012 13:16

**Run Date:** 02/03/2012 13:48

**File ID:** HY.020312.134828

Analyte		CAS #	Result	Qual	LOQ	LOD
Mercury		7439-97-6		U	0.000200	0.000100
U	Analyte was not detected. The concentration is below the reported LOD.					

**Sample #:** L12020016-06

**Client ID:** MPL3-0112-2

**Matrix:** Water

**Workgroup #:** WG388787

**Collect Date:** 01/31/2012 10:15

**Sample Tag:** DL01

**PrePrep Method:** N/A

**Prep Method:** 300.0

**Analytical Method:** 300.0

**Analyst:** JBK

**Dilution:** 4

**Units:** mg/L

**Instrument:** IC2

**Prep Date:** 02/03/2012 13:04

**Cal Date:** 12/21/2011 13:49

**Run Date:** 02/03/2012 17:40

**File ID:** I20203121740.18

Analyte		CAS #	Result	Qual	LOQ	LOD
Chloride		16887-00-6	58.2		0.800	0.400
Fluoride		16984-48-8		U	0.800	0.400
Sulfate		14808-79-8	110		4.00	2.00
U	Analyte was not detected. The concentration is below the reported LOD.					

**Sample #:** L12020016-06

**Client ID:** MPL3-0112-2

**Matrix:** Water

**Workgroup #:** WG388633

**Collect Date:** 01/31/2012 10:15

**Sample Tag:**
**PrePrep Method:** N/A

**Prep Method:** 9040C

**Analytical Method:** 9040C

**Analyst:** TMM

**Dilution:** 1

**Units:** UNITS

**Instrument:** ORION-4STAR

**Prep Date:** N/A

**Cal Date:**
**Run Date:** 02/02/2012 14:34

**File ID:** OS12020614582301

Analyte		CAS #	Result	Qual	LOQ	LOD
Corrosivity pH		10-29-7	7.40		0.000	0.000

**Sample #:** L12020016-06

**Client ID:** MPL3-0112-2

**Matrix:** Water

**Workgroup #:** WG388663

**Collect Date:** 01/31/2012 10:15

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 310.2

**Analytical Method:** 310.2

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 11:29

**Run Date:** 02/03/2012 11:47

**File ID:** SC120203002.038

Analyte		CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)			129		20.0	10.0

## Certificate of Analysis

<b>Sample #:</b> L12020016-06	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL3-0112-2	<b>Prep Method:</b> 310.2	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 310.2	<b>Cal Date:</b> 02/03/2012 11:29			
<b>Workgroup #:</b> WG388663	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/03/2012 11:47			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> SC120203002.038			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		129		20.0	10.0

<b>Sample #:</b> L12020016-06	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL3-0112-2	<b>Prep Method:</b> 310.2	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 310.2	<b>Cal Date:</b> 02/03/2012 11:29			
<b>Workgroup #:</b> WG388663	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/03/2012 11:47			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> SC120203002.038			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)			U	20.0	10.0
U	Analyte was not detected. The concentration is below the reported LOD.				

<b>Sample #:</b> L12020016-06	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL3-0112-2	<b>Prep Method:</b> SM4500-CN-C,G	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-CN-C,G	<b>Cal Date:</b> 02/03/2012 13:25			
<b>Workgroup #:</b> WG388635	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/03/2012 14:10			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202031410-15			
<b>Sample Tag:</b> CN-A	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.268		0.0100	0.00500

<b>Sample #:</b> L12020016-06	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL3-0112-2	<b>Prep Method:</b> SM4500-CN-I	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-CN-I	<b>Cal Date:</b> 02/08/2012 08:25			
<b>Workgroup #:</b> WG388947	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/08/2012 08:40			
<b>Collect Date:</b> 01/31/2012 10:15	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202080840-13			
<b>Sample Tag:</b> wd	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0390		0.0100	0.00500

## Certificate of Analysis

**Sample #:** L12020016-06

**Client ID:** MPL3-0112-2

**Matrix:** Water

**Workgroup #:** WG388634

**Collect Date:** 01/31/2012 10:15

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 9014-9010C

**Analytical Method:** 9014-9010C

**Analyst:** JBK

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 02/03/2012 13:20

**Run Date:** 02/03/2012 13:30

**File ID:** 1V.1202031330-12

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.282		0.0100	0.00500

**Sample #:** L12020016-06

**Client ID:** MPL3-0112-2

**Matrix:** Water

**Workgroup #:** WG388884

**Collect Date:** 01/31/2012 10:15

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 120.1

**Analytical Method:** 120.1

**Analyst:** DLP

**Dilution:** 1

**Units:** umhos/cm

**Instrument:** YSI-32

**Prep Date:** N/A

**Cal Date:**

**Run Date:** 02/06/2012 14:30

**File ID:** 32.1202061430-12

Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		675		1.00	0.500

**Sample #:** L12020016-06

**Client ID:** MPL3-0112-2

**Matrix:** Water

**Workgroup #:** WG389203

**Collect Date:** 01/31/2012 10:15

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 420.1

**Analytical Method:** 420.1

**Analyst:** DLP

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 12/02/2011 12:50

**Run Date:** 02/09/2012 15:20

**File ID:** 1V.1202091520-11

Analyte	CAS #	Result	Qual	LOQ	LOD
Phenolics, Total	64743-03-9		U	0.00556	0.00333

U Analyte was not detected. The concentration is below the reported LOD.

**Sample #:** L12020016-06

**Client ID:** MPL3-0112-2

**Matrix:** Water

**Workgroup #:** WG388906

**Collect Date:** 01/31/2012 10:15

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 350.1

**Analytical Method:** 350.1

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/07/2012 08:29

**Run Date:** 02/07/2012 09:03

**File ID:** SC120207001.045

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7		U	0.100	0.0500

U Analyte was not detected. The concentration is below the reported LOD.

## Certificate of Analysis

Sample #: L12020016-06

Client ID: MPL3-0112-2

Matrix: Water

Workgroup #: WG388788

Collect Date: 01/31/2012 10:15

Sample Tag:

PrePrep Method: N/A

Prep Method: 353.2

Analytical Method: 353.2

Analyst: DIH

Dilution: 8

Units: mg/L

Instrument: SMARTCHEM

Prep Date: N/A

Cal Date: 02/03/2012 13:00

Run Date: 02/06/2012 09:16

File ID: SC12020614502901

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		8.01		0.400	0.200

Sample #: L12020016-06

Client ID: MPL3-0112-2

Matrix: Water

Workgroup #: WG388592

Collect Date: 01/31/2012 10:15

Sample Tag:

PrePrep Method: N/A

Prep Method: SM4500-P-E-20th

Analytical Method: SM4500-P-E-20th

Analyst: HJR

Dilution: 1

Units: mg/L

Instrument: UV-120-1V

Prep Date: N/A

Cal Date: 12/21/2011 14:35

Run Date: 02/02/2012 10:40

File ID: 1V.1202021040-05

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.139		0.0500	0.0250

Sample #: L12020016-06

Client ID: MPL3-0112-2

Matrix: Water

Workgroup #: WG388592

Collect Date: 01/31/2012 10:15

Sample Tag:

PrePrep Method: N/A

Prep Method: 160.1/SM2540C

Analytical Method: 160.1

Analyst: HJR

Dilution: 1

Units: mg/L

Instrument: OVEN

Prep Date: N/A

Cal Date:

Run Date: 02/02/2012 14:40

File ID: EN.1202021440-12

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		366		20.0	10.0

Sample #: L12020016-06

Client ID: MPL3-0112-2

Matrix: Water

Workgroup #: WG388670

Collect Date: 01/31/2012 10:15

Sample Tag: 01

PrePrep Method: N/A

Prep Method: 415.1

Analytical Method: 415.1

Analyst: DIH

Dilution: 1

Units: mg/L

Instrument: TOC-VWP

Prep Date: N/A

Cal Date: 12/06/2011 09:40

Run Date: 02/03/2012 13:17

File ID: TC02032012.019

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		3.18		1.00	0.500

## Certificate of Analysis

**Sample #:** L12020016-06**Client ID:** MPL3-0112-2**Matrix:** Water**Workgroup #:** WG388588**Collect Date:** 01/31/2012 10:15**Sample Tag:****PrePrep Method:** N/A**Prep Method:** 160.2/SM2540D**Analytical Method:** 160.2**Analyst:** HJR**Dilution:** 1**Units:** mg/L**Instrument:** OVEN**Prep Date:** N/A**Cal Date:****Run Date:** 02/02/2012 14:20**File ID:** EN.1202021420-21

<b>Analyte</b>	<b>CAS #</b>	<b>Result</b>	<b>Qual</b>	<b>LOQ</b>	<b>LOD</b>
Total Suspended Solids			U	5.00	2.50

**Sample #:** L12020016-07**Client ID:** MPL1-0112-1**Matrix:** Water**Workgroup #:** WG388564**Collect Date:** 01/31/2012 15:00**Sample Tag:** 01**PrePrep Method:** N/A**Prep Method:** 5030B/5030C/5035A**Analytical Method:** 8260B**Analyst:** TMB**Dilution:** 1**Units:** ug/L**Instrument:** HPMS11**Prep Date:** N/A**Cal Date:** 01/19/2012 19:25**Run Date:** 02/02/2012 19:47**File ID:** 11M80886

<b>Analyte</b>	<b>CAS #</b>	<b>Result</b>	<b>Qual</b>	<b>LOQ</b>	<b>LOD</b>
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.200
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,1-Dichloroethene	75-35-4		U	1.00	0.500
1,2,3-Trichloroproppane	96-18-4		U	1.00	0.500
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	2.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
2-Butanone	78-93-3		U	5.00	2.50
2-Chlorotoluene	95-49-8		U	1.00	0.125
2-Hexanone	591-78-6		U	5.00	2.50
4-Chlorotoluene	106-43-4		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Acetone	67-64-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125

## Certificate of Analysis

Analyte	CAS #	Result		Qual	LOQ	LOD
Bromobenzene	108-86-1			U	1.00	0.125
Bromodichloromethane	75-27-4			U	1.00	0.250
Bromoform	75-25-2			U	1.00	0.500
Bromomethane	74-83-9			U	1.00	0.500
Carbon disulfide	75-15-0			U	1.00	0.500
Carbon tetrachloride	56-23-5			U	1.00	0.250
Chlorobenzene	108-90-7			U	1.00	0.125
Chlorodibromomethane	124-48-1			U	1.00	0.250
Chloroethane	75-00-3			U	1.00	0.500
Chloroform	67-66-3			U	1.00	0.125
Chloromethane	74-87-3			U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2			U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5			U	1.00	0.250
Dichlorodifluoromethane	75-71-8			U	1.00	0.250
Ethylbenzene	100-41-4			U	1.00	0.250
Hexachlorobutadiene	87-68-3			U	1.00	0.250
Isopropylbenzene	98-82-8			U	1.00	0.250
Methyl t-butyl ether (MTBE)	1634-04-4			U	1.00	0.500
Methylene chloride	75-09-2			U	1.00	0.250
n-Butylbenzene	104-51-8			U	1.00	0.250
n-Propylbenzene	103-65-1			U	1.00	0.125
Naphthalene	91-20-3			U	1.00	0.200
sec-Butylbenzene	135-98-8			U	1.00	0.250
Styrene	100-42-5			U	1.00	0.125
tert-Butylbenzene	98-06-6			U	1.00	0.250
Tetrachloroethene	127-18-4			U	1.00	0.250
Toluene	108-88-3			U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5			U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6			U	1.00	0.500
Trichloroethene	79-01-6			U	1.00	0.250
Trichlorofluoromethane	75-69-4			U	1.00	0.250
Vinyl acetate	108-05-4			U	5.00	2.50
Vinyl chloride	75-01-4			U	1.00	0.250
Xylenes	1330-20-7			U	1.00	0.500
Surrogate	Recovery	Lower Limit	Upper Limit	Q		
1,2-Dichloroethane-d4	100	70	120			
4-Bromofluorobenzene	103	75	120			
Dibromofluoromethane	97.4	85	115			
Toluene-d8	101	85	120			

## Certificate of Analysis

U	Analyte was not detected. The concentration is below the reported LOD.
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Sample #: L12020016-07	PrePrep Method: N/A	Instrument: HPMS7
Client ID: MPL1-0112-1	Prep Method: 3510C	Prep Date: 02/02/2012 13:00
Matrix: Water	Analytical Method: 8270C	Cal Date: 01/27/2012 12:22
Workgroup #: WG388668	Analyst: CAA	Run Date: 02/03/2012 12:16
Collect Date: 01/31/2012 15:00	Dilution: 1	File ID: 7M54265
Sample Tag: 01	Units: ug/L	

Analyte	CAS #	Result	Qual	LOQ	LOD
Naphthalene	91-20-3		U	0.0575	0.0287
Acenaphthylene	208-96-8		U	0.0575	0.0287
Acenaphthene	83-32-9		U	0.0575	0.0287
Fluorene	86-73-7		U	0.0575	0.0287
Phenanthrene	85-01-8		U	0.0575	0.0287
Anthracene	120-12-7		U	0.0575	0.0287
Fluoranthene	206-44-0		U	0.0575	0.0287
Pyrene	129-00-0		U	0.0575	0.0287
Benzo(a)anthracene	56-55-3		U	0.0575	0.0287
Chrysene	218-01-9		U	0.0575	0.0287
Benzo(b)fluoranthene	205-99-2		U	0.0575	0.0287
Benzo(k)fluoranthene	207-08-9		U	0.0575	0.0287
Benzo(a)pyrene	50-32-8		U	0.0575	0.0287
Indeno(1,2,3-cd)pyrene	193-39-5		U	0.0575	0.0287
Dibenz(a,h)anthracene	53-70-3		U	0.0575	0.0287
Benzo(g,h,i)perylene	191-24-2		U	0.0575	0.0287
1-Methylnaphthalene	90-12-0		U	0.0575	0.0287
2-Methylnaphthalene	91-57-6		U	0.0575	0.0287

Surrogate	Recovery	Lower Limit	Upper Limit	Q
Nitrobenzene-d5	94.7	35	114	
2-Fluorobiphenyl	95.6	50	110	
p-Terphenyl-d14	125	33	141	

U	Analyte was not detected. The concentration is below the reported LOD.
---	--

## Certificate of Analysis

**Sample #:** L12020016-07

**PrePrep Method:** N/A

**Instrument:** HP9

**Client ID:** MPL1-0112-1

**Prep Method:** 3510C

**Prep Date:** 02/02/2012 08:30

**Matrix:** Water

**Analytical Method:** 8082

**Cal Date:** 01/09/2012 12:41

**Workgroup #:** WG388695

**Analyst:** ECL

**Run Date:** 02/03/2012 15:22

**Collect Date:** 01/31/2012 15:00

**Dilution:** 1

**File ID:** 9GF67012.F

**Sample Tag:** 01

**Units:** ug/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Aroclor-1016	12674-11-2		U	0.562	0.281
Aroclor-1221	11104-28-2		U	0.562	0.281
Aroclor-1232	11141-16-5		U	0.562	0.281
Aroclor-1242	53469-21-9		U	0.562	0.281
Aroclor-1248	12672-29-6		U	0.562	0.281
Aroclor-1254	11097-69-1		U	0.562	0.281
Aroclor-1260	11096-82-5		U	0.562	0.281
Surrogate	Recovery	Lower Limit	Upper Limit	Q	
2,4,5,6-Tetrachloro-m-xylene	67.1	30	132		
Decachlorobiphenyl	82.4	40	135		

U	Analyte was not detected. The concentration is below the reported LOD.
---	--

**Sample #:** L12020016-07

**PrePrep Method:** N/A

**Instrument:** ICP-THERMO2

**Client ID:** MPL1-0112-1

**Prep Method:** 3005A

**Prep Date:** 02/03/2012 06:31

**Matrix:** Water

**Analytical Method:** 6010B

**Cal Date:** 02/07/2012 08:55

**Workgroup #:** WG388773

**Analyst:** EDL

**Run Date:** 02/07/2012 16:15

**Collect Date:** 01/31/2012 15:00

**Dilution:** 1

**File ID:** T2.020712.161523

**Sample Tag:** 01

**Units:** mg/L

Analyte	CAS #	Result	Qual	LOQ	LOD
Aluminum, Total	7429-90-5		U	0.100	0.0500
Beryllium, Total	7440-41-7		U	0.00200	0.00100
Boron, Total	7440-42-8		U	0.100	0.0500
Calcium, Total	7440-70-2	43.3		0.200	0.100
Iron, Total	7439-89-6	0.175		0.100	0.0500
Magnesium, Total	7439-95-4	7.70		0.500	0.250
Molybdenum, Total	7439-98-7		U	0.0100	0.00500
Potassium, Total	7440-09-7	2.42		1.00	0.500
Sodium, Total	7440-23-5	23.7		0.500	0.250
Tin, Total	7440-31-5		U	0.500	0.250
Vanadium, Total	7440-62-2		U	0.0100	0.00500
Zinc, Total	7440-66-6		U	0.0200	0.0100

U	Analyte was not detected. The concentration is below the reported LOD.
---	--

## Certificate of Analysis

**Sample #:** L12020016-07

**Client ID:** MPL1-0112-1

**Matrix:** Water

**Workgroup #:** WG388710

**Collect Date:** 01/31/2012 15:00

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 3015

**Analytical Method:** 6020

**Analyst:** JYH

**Dilution:** 1

**Units:** mg/L

**Instrument:** ELAN-ICP

**Prep Date:** 02/03/2012 06:03

**Cal Date:** 02/06/2012 09:52

**Run Date:** 02/06/2012 13:09

**File ID:** EL.020612.130954

Analyte	CAS #	Result	Qual	LOQ	LOD
Antimony, Total	7440-36-0		U	0.00100	0.000500
Arsenic, Total	7440-38-2	0.00111		0.00100	0.000500
Barium, Total	7440-39-3	0.109		0.00300	0.00150
Chromium, Total	7440-47-3	0.00336		0.00200	0.00100
Cobalt, Total	7440-48-4		U	0.00100	0.000500
Copper, Total	7440-50-8		U	0.00200	0.00100
Lead, Total	7439-92-1		U	0.00100	0.000500
Manganese, Total	7439-96-5		U	0.00200	0.00100
Nickel, Total	7440-02-0		U	0.00400	0.00200
Selenium, Total	7782-49-2	0.00339		0.00100	0.000500
Silver, Total	7440-22-4		U	0.00100	0.000500
Thallium, Total	7440-28-0		U	0.000200	0.000100
U	Analyte was not detected. The concentration is below the reported LOD.				

**Sample #:** L12020016-07

**Client ID:** MPL1-0112-1

**Matrix:** Water

**Workgroup #:** WG388710

**Collect Date:** 01/31/2012 15:00

**Sample Tag:** 02

**PrePrep Method:** N/A

**Prep Method:** 3015

**Analytical Method:** 6020

**Analyst:** JYH

**Dilution:** 1

**Units:** mg/L

**Instrument:** ELAN-ICP

**Prep Date:** 02/03/2012 06:03

**Cal Date:** 02/06/2012 16:22

**Run Date:** 02/06/2012 21:39

**File ID:** EL.020612.213905

Analyte	CAS #	Result	Qual	LOQ	LOD
Cadmium, Total	7440-43-9		U	0.000600	0.000300
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

**Sample #:** L12020016-07

**Client ID:** MPL1-0112-1

**Matrix:** Water

**Workgroup #:** WG388741

**Collect Date:** 01/31/2012 15:00

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 7470A

**Analytical Method:** 7470A

**Analyst:** PDM

**Dilution:** 1

**Units:** mg/L

**Instrument:** HYDRA

**Prep Date:** 02/03/2012 07:49

**Cal Date:** 02/03/2012 13:16

**Run Date:** 02/03/2012 13:53

**File ID:** HY.020312.135341

Analyte	CAS #	Result	Qual	LOQ	LOD
Mercury	7439-97-6	0.000201		0.000200	0.000100

**Sample #:** L12020016-07

**Client ID:** MPL1-0112-1

**Matrix:** Water

**Workgroup #:** WG388787

**Collect Date:** 01/31/2012 15:00

**Sample Tag:** DL01

**PrePrep Method:** N/A

**Prep Method:** 300.0

**Analytical Method:** 300.0

**Analyst:** JBK

**Dilution:** 2

**Units:** mg/L

**Instrument:** IC2

**Prep Date:** 02/03/2012 13:04

**Cal Date:** 12/21/2011 13:49

**Run Date:** 02/03/2012 17:58

**File ID:** I20203121758.19

Analyte	CAS #	Result	Qual	LOQ	LOD
Chloride	16887-00-6	33.5		0.400	0.200
Fluoride	16984-48-8	0.354	J	0.400	0.200
Sulfate	14808-79-8	39.9		2.00	1.00
J	Estimated value ; the analyte concentration was less than the LOQ.				

**Sample #:** L12020016-07

**Client ID:** MPL1-0112-1

**Matrix:** Water

**Workgroup #:** WG388532

**Collect Date:** 01/31/2012 15:00

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 9040C

**Analytical Method:** 9040C

**Analyst:** TMM

**Dilution:** 1

**Units:** UNITS

**Instrument:** ORION-4STAR

**Prep Date:** N/A

**Cal Date:**

**Run Date:** 02/01/2012 15:03

**File ID:** OS12020615094001

Analyte	CAS #	Result	Qual	LOQ	LOD
Corrosivity pH	10-29-7	7.76		0.000	0.000

**Sample #:** L12020016-07

**Client ID:** MPL1-0112-1

**Matrix:** Water

**Workgroup #:** WG388663

**Collect Date:** 01/31/2012 15:00

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 310.2

**Analytical Method:** 310.2

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 11:29

**Run Date:** 02/03/2012 11:48

**File ID:** SC120203002.039

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Bicarbonate (as CaCO3)		102		20.0	10.0

## Certificate of Analysis

Sample #: L12020016-07

Client ID: MPL1-0112-1

Matrix: Water

Workgroup #: WG388663

Collect Date: 01/31/2012 15:00

Sample Tag: 01

PrePrep Method: N/A

Prep Method: 310.2

Analytical Method: 310.2

Analyst: DIH

Dilution: 1

Units: mg/L

Instrument: SMARTCHEM

Prep Date: N/A

Cal Date: 02/03/2012 11:29

Run Date: 02/03/2012 11:48

File ID: SC120203002.039

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Total (as CaCO3)		102		20.0	10.0

Sample #: L12020016-07

Client ID: MPL1-0112-1

Matrix: Water

Workgroup #: WG388663

Collect Date: 01/31/2012 15:00

Sample Tag: 01

PrePrep Method: N/A

Prep Method: 310.2

Analytical Method: 310.2

Analyst: DIH

Dilution: 1

Units: mg/L

Instrument: SMARTCHEM

Prep Date: N/A

Cal Date: 02/03/2012 11:29

Run Date: 02/03/2012 11:48

File ID: SC120203002.039

Analyte	CAS #	Result	Qual	LOQ	LOD
Alkalinity, Carbonate (as CaCO3)			U	20.0	10.0

U Analyte was not detected. The concentration is below the reported LOD.

Sample #: L12020016-07

Client ID: MPL1-0112-1

Matrix: Water

Workgroup #: WG388634

Collect Date: 01/31/2012 15:00

Sample Tag:

PrePrep Method: N/A

Prep Method: 9014-9010C

Analytical Method: 9014-9010C

Analyst: JBK

Dilution: 1

Units: mg/L

Instrument: UV-120-1V

Prep Date: N/A

Cal Date: 02/03/2012 13:20

Run Date: 02/03/2012 13:30

File ID: 1V.1202031330-13

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide	57-12-5	0.162		0.0100	0.00500

Sample #: L12020016-07

Client ID: MPL1-0112-1

Matrix: Water

Workgroup #: WG388947

Collect Date: 01/31/2012 15:00

Sample Tag: wd

PrePrep Method: N/A

Prep Method: SM4500-CN-I

Analytical Method: SM4500-CN-I

Analyst: JBK

Dilution: 1

Units: mg/L

Instrument: UV-120-1V

Prep Date: N/A

Cal Date: 02/08/2012 08:25

Run Date: 02/08/2012 08:40

File ID: 1V.1202080840-14

Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Weak/Dissociable	57-12-5	0.0298		0.0100	0.00500

## Certificate of Analysis

<b>Sample #:</b> L12020016-07	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL1-0112-1	<b>Prep Method:</b> SM4500-CN-C,G	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> SM4500-CN-C,G	<b>Cal Date:</b> 02/03/2012 13:25			
<b>Workgroup #:</b> WG388635	<b>Analyst:</b> JBK	<b>Run Date:</b> 02/03/2012 14:10			
<b>Collect Date:</b> 01/31/2012 15:00	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202031410-16			
<b>Sample Tag:</b> CN-A	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Cyanide, Amenable to Chlor.	57-12-5	0.150		0.0100	0.00500

<b>Sample #:</b> L12020016-07	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> YSI-32			
<b>Client ID:</b> MPL1-0112-1	<b>Prep Method:</b> 120.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 120.1	<b>Cal Date:</b>			
<b>Workgroup #:</b> WG388884	<b>Analyst:</b> DLP	<b>Run Date:</b> 02/06/2012 14:30			
<b>Collect Date:</b> 01/31/2012 15:00	<b>Dilution:</b> 1	<b>File ID:</b> 32.1202061430-13			
<b>Sample Tag:</b>	<b>Units:</b> umhos/cm				
Analyte	CAS #	Result	Qual	LOQ	LOD
Conductivity		414		1.00	0.500

<b>Sample #:</b> L12020016-07	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> UV-120-1V			
<b>Client ID:</b> MPL1-0112-1	<b>Prep Method:</b> 420.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 420.1	<b>Cal Date:</b> 12/02/2011 12:50			
<b>Workgroup #:</b> WG389203	<b>Analyst:</b> DLP	<b>Run Date:</b> 02/09/2012 15:20			
<b>Collect Date:</b> 01/31/2012 15:00	<b>Dilution:</b> 1	<b>File ID:</b> 1V.1202091520-12			
<b>Sample Tag:</b>	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Phenolics, Total	64743-03-9		U	0.00556	0.00333
U	Analyte was not detected. The concentration is below the reported LOD.				

<b>Sample #:</b> L12020016-07	<b>PrePrep Method:</b> N/A	<b>Instrument:</b> SMARTCHEM			
<b>Client ID:</b> MPL1-0112-1	<b>Prep Method:</b> 350.1	<b>Prep Date:</b> N/A			
<b>Matrix:</b> Water	<b>Analytical Method:</b> 350.1	<b>Cal Date:</b> 02/07/2012 08:29			
<b>Workgroup #:</b> WG388906	<b>Analyst:</b> DIH	<b>Run Date:</b> 02/07/2012 09:05			
<b>Collect Date:</b> 01/31/2012 15:00	<b>Dilution:</b> 1	<b>File ID:</b> SC120207001.046			
<b>Sample Tag:</b> 01	<b>Units:</b> mg/L				
Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrogen, Ammonia	7664-41-7		U	0.100	0.0500
U	Analyte was not detected. The concentration is below the reported LOD.				

## Certificate of Analysis

**Sample #:** L12020016-07

**Client ID:** MPL1-0112-1

**Matrix:** Water

**Workgroup #:** WG388788

**Collect Date:** 01/31/2012 15:00

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 353.2

**Analytical Method:** 353.2

**Analyst:** DIH

**Dilution:** 4

**Units:** mg/L

**Instrument:** SMARTCHEM

**Prep Date:** N/A

**Cal Date:** 02/03/2012 13:00

**Run Date:** 02/06/2012 09:16

**File ID:** SC12020614503701

Analyte	CAS #	Result	Qual	LOQ	LOD
Nitrate-Nitrite (as N)		5.85		0.200	0.100

**Sample #:** L12020016-07

**Client ID:** MPL1-0112-1

**Matrix:** Water

**Workgroup #:** WG388496

**Collect Date:** 01/31/2012 15:00

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** SM4500-P-E-20th

**Analytical Method:** SM4500-P-E-20th

**Analyst:** HJR

**Dilution:** 1

**Units:** mg/L

**Instrument:** UV-120-1V

**Prep Date:** N/A

**Cal Date:** 12/21/2011 14:35

**Run Date:** 02/01/2012 10:45

**File ID:** 1V.1202011045-14

Analyte	CAS #	Result	Qual	LOQ	LOD
Orthophosphate	14265-44-2	0.158		0.0500	0.0250

**Sample #:** L12020016-07

**Client ID:** MPL1-0112-1

**Matrix:** Water

**Workgroup #:** WG388589

**Collect Date:** 01/31/2012 15:00

**Sample Tag:**

**PrePrep Method:** N/A

**Prep Method:** 160.1/SM2540C

**Analytical Method:** 160.1

**Analyst:** HJR

**Dilution:** 1

**Units:** mg/L

**Instrument:** OVEN

**Prep Date:** N/A

**Cal Date:**

**Run Date:** 02/02/2012 14:40

**File ID:** EN.1202021440-13

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Dissolved Solids		482		20.0	10.0

**Sample #:** L12020016-07

**Client ID:** MPL1-0112-1

**Matrix:** Water

**Workgroup #:** WG388670

**Collect Date:** 01/31/2012 15:00

**Sample Tag:** 01

**PrePrep Method:** N/A

**Prep Method:** 415.1

**Analytical Method:** 415.1

**Analyst:** DIH

**Dilution:** 1

**Units:** mg/L

**Instrument:** TOC-VWP

**Prep Date:** N/A

**Cal Date:** 12/06/2011 09:40

**Run Date:** 02/03/2012 13:30

**File ID:** TC02032012.020

Analyte	CAS #	Result	Qual	LOQ	LOD
Total Organic Carbon		1.23		1.00	0.500

## Certificate of Analysis

**Sample #:** L12020016-07**Client ID:** MPL1-0112-1**Matrix:** Water**Workgroup #:** WG388588**Collect Date:** 01/31/2012 15:00**Sample Tag:****PrePrep Method:** N/A**Prep Method:** 160.2/SM2540D**Analytical Method:** 160.2**Analyst:** HJR**Dilution:** 1**Units:** mg/L**Instrument:** OVEN**Prep Date:** N/A**Cal Date:****Run Date:** 02/02/2012 14:20**File ID:** EN.1202021420-22

<b>Analyte</b>	<b>CAS #</b>	<b>Result</b>	<b>Qual</b>	<b>LOQ</b>	<b>LOD</b>
Total Suspended Solids			U	5.00	2.50

**Sample #:** L12020016-08**Client ID:** TRIP BLANK**Matrix:** Water**Workgroup #:** WG388564**Collect Date:** 01/31/2012 00:01**Sample Tag:** 01**PrePrep Method:** N/A**Prep Method:** 5030B/5030C/5035A**Analytical Method:** 8260B**Analyst:** TMB**Dilution:** 1**Units:** ug/L**Instrument:** HPMS11**Prep Date:** N/A**Cal Date:** 01/19/2012 19:25**Run Date:** 02/02/2012 14:38**File ID:** 11M80876

<b>Analyte</b>	<b>CAS #</b>	<b>Result</b>	<b>Qual</b>	<b>LOQ</b>	<b>LOD</b>
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.200
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,1-Dichloroethene	75-35-4		U	1.00	0.500
1,2,3-Trichloroproppane	96-18-4		U	1.00	0.500
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	2.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
2-Butanone	78-93-3		U	5.00	2.50
2-Chlorotoluene	95-49-8		U	1.00	0.125
2-Hexanone	591-78-6		U	5.00	2.50
4-Chlorotoluene	106-43-4		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	5.00	2.50
Acetone	67-64-1		U	5.00	2.50
Benzene	71-43-2		U	1.00	0.125

## Certificate of Analysis

Analyte	CAS #	Result		Qual	LOQ	LOD
Bromobenzene	108-86-1			U	1.00	0.125
Bromodichloromethane	75-27-4			U	1.00	0.250
Bromoform	75-25-2			U	1.00	0.500
Bromomethane	74-83-9			U	1.00	0.500
Carbon disulfide	75-15-0			U	1.00	0.500
Carbon tetrachloride	56-23-5			U	1.00	0.250
Chlorobenzene	108-90-7			U	1.00	0.125
Chlorodibromomethane	124-48-1			U	1.00	0.250
Chloroethane	75-00-3			U	1.00	0.500
Chloroform	67-66-3			U	1.00	0.125
Chloromethane	74-87-3			U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2			U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5			U	1.00	0.250
Dichlorodifluoromethane	75-71-8			U	1.00	0.250
Ethylbenzene	100-41-4			U	1.00	0.250
Hexachlorobutadiene	87-68-3			U	1.00	0.250
Isopropylbenzene	98-82-8			U	1.00	0.250
Methyl t-butyl ether (MTBE)	1634-04-4			U	1.00	0.500
Methylene chloride	75-09-2			U	1.00	0.250
n-Butylbenzene	104-51-8			U	1.00	0.250
n-Propylbenzene	103-65-1			U	1.00	0.125
Naphthalene	91-20-3			U	1.00	0.200
sec-Butylbenzene	135-98-8			U	1.00	0.250
Styrene	100-42-5			U	1.00	0.125
tert-Butylbenzene	98-06-6			U	1.00	0.250
Tetrachloroethene	127-18-4			U	1.00	0.250
Toluene	108-88-3			U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5			U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6			U	1.00	0.500
Trichloroethene	79-01-6			U	1.00	0.250
Trichlorofluoromethane	75-69-4			U	1.00	0.250
Vinyl acetate	108-05-4			U	5.00	2.50
Vinyl chloride	75-01-4			U	1.00	0.250
Xylenes	1330-20-7			U	1.00	0.500
Surrogate	Recovery	Lower Limit	Upper Limit	Q		
1,2-Dichloroethane-d4	101	70	120			
4-Bromofluorobenzene	104	75	120			
Dibromofluoromethane	98.0	85	115			
Toluene-d8	101	85	120			

## Certificate of Analysis

U

Analyte was not detected. The concentration is below the reported LOD.

Microbac Laboratories Inc.  
Ohio Valley Division Analyst List  
February 13, 2012

---

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
ALV - AMY L. VALENTINE	AML - TONY M. LONG	AZH - AFTER HOURS
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY	CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS	CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CPD - CHAD P. DAVIS
CS - CODY M. STRAHLER	CSH - CHRIS S. HILL	DDE - DEBRA D. ELLIOTT
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DHG - DEBORAH H. GRIFFITHS
DIH - DEANNA I. HESSON	DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE
DLR - DIANNA L. RAUCH	DSM - DAVID S. MOSSOR	ECL - ERIC C. LAWSON
EDL - ERIN D. LONG	ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN
HAV - HEMA VILASAGAR	HJR - HOLLY J. REED	JAL - JOHN A. LENT
JBK - JEREMY B. KINNEY	JDH - JUSTIN D. HESSON	JKS - JANE K. SCHAAD
JLL - JOHN L. LENT	JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES
JYH - JI Y. HU	KEB - KATIE E. BARNES	KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON	LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA
MDA - MIKE D. ALBERTSON	MDC - MIKE D. COCHRAN	MES - MARY E. SCHILLING
MMB - MAREN M. BEERY	MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS	PWD - PAUL W. DENT	RAH - ROY A. HALSTEAD
REK - BOB E. KYER	RLB - BOB BUCHANAN	RLK - ROBIN L. KLINGER
RWC - RODNEY W. CAMPBELL	SJP - SUZANNE J. PAUGH	SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF	TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS	VC - VICKI COLLIER	WJB - WILL J. BEASLEY
WTD - WADE T. DELONG		

## Microbac Laboratories Inc.

## List of Valid Qualifiers

February 13, 2012

Qualkey: DOD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	The reported result is associated with a contaminated method blank.
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
B4	The BOD unseeded dilution water blank exceeded 0.2 mg/L
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits; presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	Estimated concentration; sample matrix interference.
J	Estimated value ; the analyte concentration was greater than the highest standard
J	Estimated value ; the analyte concentration was less than the LOQ.
J	The reported result is an estimated value.
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Nontarget analyte; the analyte is a tentatively identified compound (TIC) by GC/MS
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Analyte was not detected. The concentration is below the reported LOD.
UJ	Undetected; the analyte was analyzed for, but not detected.
UQ	Undetected; the analyte was analyzed for, but not detected.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

**\*\*\*Special Notes for Organic Analytes**

Microbac Laboratories Inc.

List of Valid Qualifiers

February 13, 2012

Qualkey: DOD

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.



COC No. A 28492



158 Starlite Drive  
Marietta, OH 45750

**Microbac**

Phone: 740-373-4071

Fax: 740-373-4835

## CHAIN-OF-CUSTODY RECORD

Project Contact:						Turn Around Requirements:		Project ID:		Sampler (print):						Signature:						Program:	
Mark Lyon	Normal		STP	Bradley Davis						Brady Davis						<input type="checkbox"/> CWA		<input type="checkbox"/> RCRA					
																<input type="checkbox"/> DOD		<input type="checkbox"/> AFCEE					
																<input type="checkbox"/> Other							
TOTAL # (LAB USE)																		16		16			
Al, Ba, Cr, Mn, Mo																		X		X			
Total Pheno's																		X		X			
PAH's																		X		X			
PCBs																		X		X			
RAD's																		X		X			
Hg's																		X		X			
TSS TDS																		X		X			
NH <sub>3</sub> TOC NO <sub>x</sub> NO <sub>2</sub>																		X		X			
Motols																		X		X			
Total Free Ammonium Cu																		X		X			
Alkalinity																		X		X			
Total PO <sub>4</sub>																		X		X			
C and O																		X		X			
Aminos																		X		X			
Hold																		X		X			
NUMBER OF CONTAINERS																		16		16			
Sample I.D. No.	Comp	Grav	Date	Time	Matrix*																		
MPL 4-0112-1	X		1-30-12	1355	W																		
MPL 4-0112-1NS	X		1-30-12	1355	W																		
MPL 4-0112-MED	X		1-30-12	1355	W																		
MPL 2-0112-1	X		1-30-12	1205	W																		
MPL 3-0112-1	X		1-31-12	1015	W																		
MPL 3-0112-2	X		1-31-12	1025	W																		
MPL 1-0112-1	X		1-31-12	1500	W																		

2210000022012

**Microbac 010**

Received: 02/01/2012 10:07  
By: CARA STRICKLER

Relinquished by: *Brady Davis* Date: 1-31-12 Time: 1700 Rec'd (Sign) \_\_\_\_\_

Relinquished by: *Brady Davis* Date: \_\_\_\_\_ Time: \_\_\_\_\_ Rec'd (Sign) \_\_\_\_\_

Remarks: *Cara Strickler*

\*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page \_\_\_\_ of \_\_\_\_

## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933705	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:53	ADC	RLK	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933706	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 13:05	CEB	RLK	

Comments:Products cancelled.

3	DISP	EXT	DISP	03-FEB-2012 08:40	RLB	RLB	
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Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		01-FEB-2012 13:33	CLS		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933707	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 06:46	CEB	AZH	
3	DISP	EXT	DISP	03-FEB-2012 08:40	RLB	RLB	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		

A1 - Sample Archive (COLD)  
 A2 - Sample Archive (AMBIENT)  
 F1 - Volatiles Freezer in Login  
 V1 - Volatiles Refrigerator in Login  
 W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933708	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	SEM	03-FEB-2012 11:14	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	09-FEB-2012 09:08	JKT	JBK	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933709	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 08:14	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	07-FEB-2012 09:23	JKS	DIH	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933710	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 14:02	HJR	JKS	
3	STORE	WET	A1	08-FEB-2012 08:07	JKS	DLP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933711	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 15:01	HJR	RLK	
3	STORE	WET	A1	03-FEB-2012 10:22	RLK	HJR	

Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016  
**Account:** 3005  
**Project:** 3005.011  
**Samples:** 8  
**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933712	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	03-FEB-2012 08:35	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 07:40	AZH	TMM	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933713	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	04-FEB-2012 12:35	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 08:10	JKS	DLP	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933714	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	DIG	01-FEB-2012 14:39	ERP	JKS	
3	STORE	DIG	A1	03-FEB-2012 15:50	JKS	ERP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-01	933715	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 07:24	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	08-FEB-2012 08:07	JKS	DLP	
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Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933716	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933717	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 13:05	CEB	RLK	

Comments:Products cancelled.

3	DISP	EXT	DISP	03-FEB-2012 08:41	RLB	RLB	
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Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		01-FEB-2012 13:33	CLS		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933718	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 06:46	CEB	AZH	
3	DISP	EXT	DISP	03-FEB-2012 08:40	RLB	RLB	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		

A1 - Sample Archive (COLD)  
 A2 - Sample Archive (AMBIENT)  
 F1 - Volatiles Freezer in Login  
 V1 - Volatiles Refrigerator in Login  
 W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933719	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	SEM	03-FEB-2012 11:14	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	09-FEB-2012 09:08	JKT	JBK	
---	-------	-----	----	-------------------	-----	-----	--

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933720	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 08:13	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	07-FEB-2012 09:23	JKS	DIH	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933721	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 14:02	HJR	JKS	
3	STORE	WET	A1	08-FEB-2012 08:07	JKS	DLP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933722	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 15:01	HJR	RLK	
3	STORE	WET	A1	03-FEB-2012 10:22	RLK	HJR	

Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933723	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	03-FEB-2012 08:35	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 07:41	AZH	TMM	
---	-------	-----	----	-------------------	-----	-----	--

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933724	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	04-FEB-2012 12:35	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 08:10	JKS	DLP	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933725	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	DIG	01-FEB-2012 14:39	ERP	JKS	
3	STORE	DIG	A1	03-FEB-2012 15:50	JKS	ERP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-02	933726	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 07:24	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	08-FEB-2012 08:06	JKS	DLP	
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Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933727	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933728	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 13:05	CEB	RLK	

Comments:Products cancelled.

3	DISP	EXT	DISP	03-FEB-2012 08:40	RLB	RLB	
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Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		01-FEB-2012 13:33	CLS		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933729	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 06:46	CEB	AZH	
3	DISP	EXT	DISP	03-FEB-2012 08:41	RLB	RLB	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		

A1 - Sample Archive (COLD)  
 A2 - Sample Archive (AMBIENT)  
 F1 - Volatiles Freezer in Login  
 V1 - Volatiles Refrigerator in Login  
 W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933730	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	SEM	03-FEB-2012 11:14	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	09-FEB-2012 09:08	JKT	JBK	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933731	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 08:14	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	07-FEB-2012 09:23	JKS	DIH	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933732	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 14:02	HJR	JKS	
3	STORE	WET	A1	08-FEB-2012 08:07	JKS	DLP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933733	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 15:01	HJR	RLK	
3	STORE	WET	A1	03-FEB-2012 10:22	RLK	HJR	

Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933734	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	03-FEB-2012 08:35	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 07:41	AZH	TMM	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933735	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	04-FEB-2012 12:35	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 08:10	JKS	DLP	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933736	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	DIG	01-FEB-2012 14:39	ERP	JKS	
3	STORE	DIG	A1	03-FEB-2012 15:50	JKS	ERP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-03	933737	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 07:24	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	08-FEB-2012 08:06	JKS	DLP	
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Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



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## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933738	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933739	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 13:05	CEB	RLK	

Comments:Products cancelled.

3	DISP	EXT	DISP	03-FEB-2012 08:41	RLB	RLB	
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Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		01-FEB-2012 13:33	CLS		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933740	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 06:46	CEB	AZH	
3	DISP	EXT	DISP	03-FEB-2012 08:41	RLB	RLB	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		

A1 - Sample Archive (COLD)  
 A2 - Sample Archive (AMBIENT)  
 F1 - Volatiles Freezer in Login  
 V1 - Volatiles Refrigerator in Login  
 W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933741	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	SEM	03-FEB-2012 11:14	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	09-FEB-2012 09:08	JKT	JBK	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933742	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 08:14	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	07-FEB-2012 09:23	JKS	DIH	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933743	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 14:02	HJR	JKS	
3	STORE	WET	A1	08-FEB-2012 08:06	JKS	DLP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933744	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 15:01	HJR	RLK	
3	STORE	WET	A1	03-FEB-2012 10:22	RLK	HJR	

Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933745	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	03-FEB-2012 12:03	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 07:40	AZH	TMM	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933746	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		01-FEB-2012 13:33	CLS		<2

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933747	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	DIG	01-FEB-2012 14:39	ERP	JKS	
3	STORE	DIG	A1	03-FEB-2012 15:50	JKS	ERP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	933748	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 07:24	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	08-FEB-2012 08:06	JKS	DLP	
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Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934544	826-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		04-FEB-2012 11:24	JKT		<2

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		04-FEB-2012 11:24	JKT		<2

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934545	827-PAHL

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		04-FEB-2012 11:24	JKT		

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		04-FEB-2012 11:24	JKT		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934546	8082

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	04-FEB-2012 11:24	JKT		

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	04-FEB-2012 11:24	JKT		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934547	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		04-FEB-2012 11:24	JKT		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934548	ALK-B ALK-C

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	04-FEB-2012 11:24	JKT		

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016  
**Account:** 3005  
**Project:** 3005.011  
**Samples:** 8  
**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934549	PO4

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	04-FEB-2012 11:24	JKT		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934550	TSS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	04-FEB-2012 11:24	JKT		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934551	TOC

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	04-FEB-2012 11:24	JKT		<2

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934552	T-PHEN

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	WET	04-FEB-2012 11:24	JKT		<2
2	STORE	WET	A1	10-FEB-2012 08:10	JKS	DLP	

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934553	AG-MS AL AS-MS B BA-MS BE-AX CA CD-MS CO-MS CF

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	04-FEB-2012 11:24	JKT		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-04	934554	CN-WD

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	04-FEB-2012 11:24	JKT		

A1 - Sample Archive (COLD)  
A2 - Sample Archive (AMBIENT)  
F1 - Volatiles Freezer in Login  
V1 - Volatiles Refrigerator in Login  
W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933749	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933750	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 13:05	CEB	RLK	

Comments:Products cancelled.

3	DISP	EXT	DISP	03-FEB-2012 08:41	RLB	RLB	
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Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		01-FEB-2012 13:33	CLS		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933751	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 06:46	CEB	AZH	
3	DISP	EXT	DISP	03-FEB-2012 08:41	RLB	RLB	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		

A1 - Sample Archive (COLD)  
 A2 - Sample Archive (AMBIENT)  
 F1 - Volatiles Freezer in Login  
 V1 - Volatiles Refrigerator in Login  
 W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933752	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	SEM	03-FEB-2012 11:14	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	09-FEB-2012 09:08	JKT	JBK	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933753	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 08:14	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	07-FEB-2012 09:23	JKS	DIH	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933754	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 14:02	HJR	JKS	
3	STORE	WET	A1	08-FEB-2012 08:06	JKS	DLP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933755	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 15:01	HJR	RLK	
3	STORE	WET	A1	03-FEB-2012 10:22	RLK	HJR	

Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933756	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	03-FEB-2012 12:03	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 07:40	AZH	TMM	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933757	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	04-FEB-2012 12:35	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 08:10	JKS	DLP	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933758	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	DIG	01-FEB-2012 14:39	ERP	JKS	
3	STORE	DIG	A1	03-FEB-2012 15:50	JKS	ERP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-05	933759	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 07:24	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	08-FEB-2012 08:06	JKS	DLP	
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Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login

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## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933760	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933761	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 10:33	CAF	JKS	
3	DISP	EXT	DISP	03-FEB-2012 08:41	RLB	RLB	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		01-FEB-2012 13:33	CLS		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933762	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 10:33	CAF	JKS	
3	DISP	EXT	DISP	03-FEB-2012 08:40	RLB	RLB	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		

A1 - Sample Archive (COLD)  
A2 - Sample Archive (AMBIENT)  
F1 - Volatiles Freezer in Login  
V1 - Volatiles Refrigerator in Login  
W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933763	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	SEM	03-FEB-2012 11:14	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	09-FEB-2012 09:08	JKT	JBK	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933764	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 08:13	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	07-FEB-2012 09:23	JKS	DIH	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933765	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	02-FEB-2012 10:30	HJR	JKS	
3	STORE	WET	A1	08-FEB-2012 08:07	JKS	DLP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933766	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	02-FEB-2012 13:40	HJR	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	03-FEB-2012 10:22	RLK	HJR	
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Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

Login: L12020016

Account: 3005

Project: 3005.011

Samples: 8

Due Date: 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933767	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	03-FEB-2012 12:03	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 07:41	AZH	TMM	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933768	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	WET	01-FEB-2012 13:33	CLS		<2
2	STORE	WET	A1	10-FEB-2012 08:10	JKS	DLP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933769	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	DIG	02-FEB-2012 14:54	ERP	JKS	

Comments:Products cancelled.

3	STORE	DIG	A1	03-FEB-2012 15:50	JKS	ERP	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-06	933770	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 07:24	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	08-FEB-2012 08:06	JKS	DLP	
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Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933771	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933772	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 13:05	CEB	RLK	

Comments:Products cancelled.

3	DISP	EXT	DISP	03-FEB-2012 08:40	RLB	RLB	
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Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER		01-FEB-2012 13:33	CLS		

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933773	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	PREP	W1	EXT	02-FEB-2012 06:46	CEB	AZH	
3	DISP	EXT	DISP	03-FEB-2012 08:41	RLB	RLB	

Comments:Products cancelled.

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		

A1 - Sample Archive (COLD)  
 A2 - Sample Archive (AMBIENT)  
 F1 - Volatiles Freezer in Login  
 V1 - Volatiles Refrigerator in Login  
 W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016  
**Account:** 3005  
**Project:** 3005.011  
**Samples:** 8  
**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933774	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	SEM	03-FEB-2012 11:14	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	09-FEB-2012 09:08	JKT	JBK	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933775	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 08:14	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	07-FEB-2012 09:23	JKS	DIH	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933776	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 14:02	HJR	JKS	
3	STORE	WET	A1	08-FEB-2012 08:06	JKS	DLP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933777	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	01-FEB-2012 15:01	HJR	RLK	
3	STORE	WET	A1	03-FEB-2012 10:22	RLK	HJR	

Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933778	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	03-FEB-2012 12:03	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 07:40	AZH	TMM	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933779	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		<2
2	ANALYZ	W1	WET	04-FEB-2012 12:35	DIH	JKS	

Comments:Products cancelled.

3	STORE	WET	A1	10-FEB-2012 08:10	JKS	DLP	
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Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933780	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	DIG	01-FEB-2012 14:39	ERP	JKS	
3	STORE	DIG	A1	03-FEB-2012 15:50	JKS	ERP	

Comments:Products cancelled.

<u>Samplenumber</u>	<u>Container ID</u>	<u>Products</u>
L12020016-07	933781	

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	W1	01-FEB-2012 13:33	CLS		
2	ANALYZ	W1	WET	03-FEB-2012 07:24	JBK	RLK	

Comments:Products cancelled.

3	STORE	WET	A1	08-FEB-2012 08:06	JKS	DLP	
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Comments:Products cancelled.

A1 - Sample Archive (COLD)

A2 - Sample Archive (AMBIENT)

F1 - Volatiles Freezer in Login

V1 - Volatiles Refrigerator in Login

W1 - Walkin Cooler in Login



## Internal Chain of Custody Report

**Login:** L12020016**Account:** 3005**Project:** 3005.011**Samples:** 8**Due Date:** 10-FEB-2012

<u>Samplenum</u>	<u>Container ID</u>	<u>Products</u>
L12020016-08	934060	826-SPE

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	02-FEB-2012 10:42	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish	pH
1	LOGIN	COOLER	V1	02-FEB-2012 10:42	CLS		<2
2	ANALYZ	V1	ORG4	02-FEB-2012 10:54	ADC	RLK	

A1 - Sample Archive (COLD)  
 A2 - Sample Archive (AMBIENT)  
 F1 - Volatiles Freezer in Login  
 V1 - Volatiles Refrigerator in Login  
 W1 - Walkin Cooler in Login

